

## DOCUMENT RESUME

ED 399 140

SE 057 734

TITLE Academic Science and Engineering R&D Expenditures, Fiscal Year 1993. Detailed Statistical Tables.

INSTITUTION National Science Foundation, Arlington, VA. Div. of Science Resources Studies.

REPORT NO NSF-95-332

PUB DATE 95

NOTE 207p.

AVAILABLE FROM Division of Science Resources Studies, National Science Foundation, Arlington, VA 22230; e-mail: pubs@nsf.gov; fax: 703-644-4278.

PUB TYPE Statistical Data (110) -- Reports -- Research/Technical (143) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC09 Plus Postage.

DESCRIPTORS \*Budgets; \*Educational Finance; Engineering; Higher Education; \*Research and Development; Sciences; Surveys; Tables (Data)

## ABSTRACT

The data presented in this report were compiled from the National Science Foundation's (NSF) fiscal year 1993 Survey of Scientific and Engineering Expenditures at Universities and Colleges. Surveyed are science and engineering expenditures for separately budgeted research and development. Terms used in institutional accounting procedures are incorporated throughout the tables. Data were collected from 659 institutions of higher education in the United States and Outlying Areas, resulting in a 96.8% response rate. Also, forms were received from 19 federally funded research and development centers. Seventy-four detailed statistical tables are included in this report. Data are categorized on the basis of field, source of funds, geographic distribution, expenditure amount, and institution. Contains university-administered federally funded research and development centers and survey instruments. (JRH)

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# Academic Science and Engineering R&D Expenditures

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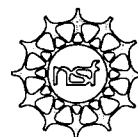
**Fiscal Year 1993**

**Detailed Statistical Tables**

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NSF 95-332

# **Academic Science and Engineering R&D Expenditures**

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**Fiscal Year 1993**

**Detailed Statistical Tables**

**M. Marge Machen, Project Officer**

**Division of Science Resources Studies  
Directorate for Social, Behavioral and Economic Sciences**

**National Science Foundation**



**NSF 95-332**

## Suggested Citation

National Science Foundation, *Academic Science and Engineering R&D Expenditures: Fiscal Year 1993*, NSF 95-332 (Arlington, VA, 1995).

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## Contributors

Data collection, preparation, and tabulations were performed by Quantum Research Corp. for the National Science Foundation. The Project Officer for this report was M. Marge Machen.

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# GENERAL NOTES

The data presented in this report were compiled from the National Science Foundation's (NSF's) fiscal year (FY) 1993 Survey of Scientific and Engineering Expenditures at Universities and Colleges. They refer to science and engineering (S&E) expenditures for separately budgeted research and development (R&D). Terms used in institutional accounting procedures are incorporated throughout the tables.

The term "separately budgeted R&D expenditures" includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. "Expenditures" are funds actually spent by an institution during its fiscal year. "Separately budgeted R&D equipment purchased from current funds" includes all research equipment purchased under sponsored research project awards.

"Federally funded research and development centers" (FFRDCs) are R&D-performing organizations that range from the traditional contractor-owned/contractor-operated or Government-owned/contractor-operated organizational structures to various degrees of contractor/Government control and ownership. FFRDCs are formed to achieve particular Federal R&D objectives that cannot be met as effectively by existing organizations.

The terms "imputation" and "imputed data" refer to the computerized process by which NSF develops estimates of data when institutions do not furnish the information upon request. Using this process, estimates are developed that are based primarily on key data items reported in prior years' surveys when available. When not available, estimates are based on figures derived from data of respondent institutions that have similar characteristics, including highest degree granted and type of institutional control (public or private). In this publication, the letter "i" is used to identify imputed data and the letter "e" is used when institutional respondents indicated that their data were estimated or when data required slight mathematical adjustments.

Data presented in trend tables are assembled from the most recently completed survey cycle. Since prior years' data are reviewed for consistency with current year responses and, when necessary, are revised in consultation with institutional respondents, references to prior years' data should be restricted to this document.

Requests for additional information concerning the survey findings for the current or prior surveys should be directed to Ms. Marge Machen at—

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SECTION A.

TECHNICAL NOTES

## SCOPE OF THE SURVEY

Data for the National Science Foundation's (NSF's) fiscal year (FY) 1993 report on research and development (R&D) expenditures were collected from 681 institutions of higher education in the United States and Outlying Areas. These institutions have doctoral programs in science and engineering, are historically black colleges or universities that expend any amount of separately budgeted R&D in science and engineering, and/or are other institutions that expend at least \$50,000 in separately budgeted R&D in science and engineering. This is the first year since FY 1988 that the entire population of institutions meeting these criteria was surveyed.

In addition, the survey includes 19 federally funded research and development centers (FFRDCs). To qualify, an FFRDC must be engaged in basic or applied research, development, or management of R&D activities, and the results of these activities must be directly monitored by the Federal Government—usually a single agency—in a relationship expected to be maintained on a long-term basis. The center must be operated, managed, and administered by either a university or consortium of universities as an autonomous organization or as an identifiable separate operating unit of its parent institution. Finally, 70 percent or more of the center's financial support must be received from the Federal Government.

Although the same survey form (NSF Form 411) is used to collect data from both academic institutions and FFRDCs, the resulting data are presented separately in this report. The survey population was reviewed prior to mailing the questionnaires to ensure that each institutional classification was accurate. Characteristics of the schools were reviewed before and during the course of the survey to determine if changes had occurred (i.e., in highest degree granted or in terms of school openings, closings, or mergers).

In FY 1993, NSF conducted a thorough review of higher education institutions to ensure that all universities and colleges meeting the criteria were included in the survey universe. As a result of dropping institutions from and adding institutions to the survey universe, the overall number of institutions increased from 613 in FY 1992 to 700 in FY 1993. Although a change in the survey universe does affect the consistency of trend comparisons, this change increased total R&D expenditures by less than 0.6

percent from FY 1992 to FY 1993. In other words, the 540 institutions that were in the universe in both FY 1992 and FY 1993 performed approximately 99.4 percent of all expenditures reported through the survey.

## SURVEY INSTRUMENT

Most major R&D performers have incorporated into their recordkeeping systems the data that are essential to complete this survey, thereby ensuring a consistent format from one year to the next. Such consistency yields the most useful statistics for time series. As a rule, information to complete this questionnaire is found within the institutions' yearend accounting records.

The survey questionnaire consists of three main items:

**Item 1** is a request that institutions report their total current expenditures for separately budgeted science and engineering (S&E) R&D for all activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit, i.e., research centers, within the institution by source of funds. In addition, schools are asked to provide the percentage of the total and the percentage of the federally financed expenditures that are considered basic research. Included also are research funds for which an outside organization, educational or other, is a subrecipient. Care should be observed when interpreting data on source of funds; for example, industry R&D support is limited to grants and contracts for R&D activities from profitmaking organizations, and the total reported excludes research funded through unrestricted accounts and from corporate foundations, endowments, and fellowships to students. An increasing number of institutions have linkages with industry and foundations via subcontracts, thus complicating the identification of funding source. In addition, institutional policy may determine whether unrestricted State support is reported as State or as institutional funding.

**Item 2** is a request for total and federally financed current fund expenditures for separately budgeted R&D activities by detailed S&E fields. Major fields remain unchanged from the FY 1992 questionnaire. When interpreting these data at the detailed discipline level, users should keep in mind that there is

considerable interdisciplinary activity and/or overlap among subdisciplines.

Item 3 is a request for the portions of total and federally financed expenditures reported in items 1 and 2 that were used for the purchase of research equipment out of current funds. This portion includes all research equipment purchased under sponsored research project awards and disbursed in the same detailed disciplines as in item 2. These data are of special interest to Federal and institutional policymakers in determining current funding levels for scientific research instrumentation.

## RESPONSE RATE

The FY 1993 survey questionnaires were mailed in October 1993. Every effort was made to maintain close contact with respondents in order to preserve both consistency and continuity in the resultant data. Questionnaires were carefully examined for completeness upon receipt. Computerized facsimiles of the survey data were then prepared for each institution, comparing the current and 2 prior years' data and noting any substantive disparities. These facsimiles were mailed to the respondents so that they could provide revisions before final processing and tabulation of the data.

Respondents were asked to explain significant discrepancies between current and prior years' reporting patterns previously verified as correct. They were encouraged to correct prior years' data if anomalies were identified. When updated or amended figures covering past years were submitted, trend data were correspondingly changed by NSF. Similarly, if a respondent institution underwent an organizational change, such as a merger, NSF incorporated the effects of such changes into prior years' data.

By the survey closing date in mid-July, forms had been received from 659 universities and colleges out of the academic population of 681, resulting in a 96.8-percent response rate. Responses were received from 97.7 percent of all doctorate-granting institutions, where 98.1 percent of the R&D expenditures in S&E fields was disbursed. Also, forms were received from all 19 FFRDCs. Table A-1 displays a detailed breakdown of the response rates by highest degree granted.

## NATIONAL TOTAL AND IMPUTATION

To provide a national estimate for all universities and colleges performing R&D in FY 1993, it was necessary to implement two statistical procedures. First, data were estimated by "imputation" for approximately 3 percent of the population that had not responded by the closing date of the survey. Imputation has been used consistently since FY 1976. Second, data were either imputed or estimated for universities and colleges that submitted only partial responses. The combined imputed and/or estimated amounts totaled \$23 million, or 0.1 percent of the \$19.9 billion total, as shown in table A-2.

Tables A-3a and A-3b present a breakdown of the imputed and/or estimated amounts by broad S&E field. The dollar amount imputed and/or estimated is displayed along with the percentage it represents of the national estimate for universities and colleges in a particular field. The amount imputed and/or estimated is similarly broken down by source of funds in table A-4.

Table A-5 represents the number of institutions actually surveyed each year since FY 1988. In FY 1988 and FY 1993, all institutions in the survey universe were surveyed. During the intervening years, FY 1989 through FY 1992, the survey was conducted as a sample comprised of all doctorate-granting institutions, all historically black colleges and universities, all academically administered FFRDCs, and a random sample of all other institutions in the survey universe.

A significant number of surveyed institutions have been responding only intermittently in past years, providing data one year, not responding for one or more subsequent years, and then providing data again. For the years in which no response was received, data have been imputed as previously described. Although the imputation algorithm accurately reflects national trends, it cannot account for reporting anomalies at individual institutions. For this reason a separate backcasting of prior years' data was performed, following current-year imputation.

For each institution, formerly imputed key variables for items 1 to 3 were compared with subsequent submissions to determine whether the imputed data accurately represent the growth patterns shown by reported data. Reestimation was applied

when the imputed data were not consistent with reported data. If data were reported for fiscal years 1990 and 1993 but not for the intervening years, for example, the difference between the reported figures for each item total was calculated and evenly distributed across the intervening years (1991–92). The new figures were spread across disciplines (items 2 and 3) or sources of support (item 1) on the basis of the most recent reporting pattern. A clean facsimile was generated for each of the institutions undergoing these procedures and returned to the school for comment. These procedures resulted in much more consistent reporting trends for individual institutions but had little effect upon aggregate figures reflecting national totals.

## DATA ANOMALIES

Aggregate academic expenditure data are generally consistent from year to year, although data for individual institutions may vary considerably. Data anomalies may reflect true increases or decreases in expenditures or may be the result of changes in reporting methodology.

## HIGHEST-DEGREE-GRANTED TABLES

Several longitudinal tables display data for institutions whose highest S&E degree granted is at the doctoral level. In tables produced prior to FY 1992, it would have been difficult to identify whether changes in yearly R&D expenditures were caused by changes in expenditure levels or in the number of doctorate-granting institutions. In order to maintain a consistent group of institutions across all years, the highest-degree-granted status for each institution is based on the highest degree granted in the most recent year, FY 1993.

## DATA FILES

Public-use data files from NSF's academic S&E surveys are available and will normally be shipped on tape (at a small charge) or electronically within 3 working days from receipt of order. Data files from the previous years and most recent surveys (1993) are currently available. Individuals interested in obtaining data files should request a copy of the *Guide to the Data Files From the National Science Foundation's Annual Surveys of Academic Science and Engineering*, which contains order forms and detailed informa-

tion about the files. This document may be obtained by contacting NSF's Division of Science Resources Studies at—

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Telephone: (703) 306-1772, ext. 6934  
Internet: [mmachen@nsf.gov](mailto:mmachen@nsf.gov)

Selected data items for individual doctorate-granting, master's-granting, and historically black institutions are available on computer-generated Institutional Profiles, which consist of data not only from this survey, but also from NSF's other two academic S&E surveys: Federal Support to Universities, Colleges, and Nonprofit Institutions (Federal Support Survey) and Graduate Students and Postdoctorates in Science and Engineering (Graduate Student Survey). Institutional Profiles for a single institution or limited group of institutions may be ordered by contacting Mr. Richard Bennof at the above address or by phone or e-mail:

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CASPAR data are drawn from a number of sources. All data are available on the individual institutional, State, and national levels. Longitudinal data from surveys of universities and colleges conducted by the NSF Division of Science Resources Studies include this R&D Expenditures Survey, the Federal Support Survey, and the Graduate Student Survey. Data from surveys of universities and colleges conducted by the National Center for Education

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**Table A-1. Response rates for the Academic Science and Engineering R&D  
Expenditures Survey at all institutions,  
by type of institution: FY 1993**

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Highest degree granted	Number in survey universe	Number of complete responses	Number of partial responses	Total number of responses	Response rate
Grand total .....	700	499	179	678	96.9%
Universities and colleges total .....	681	480	179	659	96.8
Doctorate .....	350	239	103	342	97.7
Master's .....	202	147	44	191	94.6
Bachelor's and no S&E degree .....	129	94	32	126	97.7
FFRDCs total .....	19	19	0	19	100.0

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table A-2. Imputed and/or estimated amount for the Academic Science and Engineering R&D Expenditures Survey at universities and colleges, by type of institution: FY 1993**

Page 1 of 1

Highest degree granted	Separately budgeted R&D expenditures	Amount imputed and/or estimated	Imputed and/or estimated as percent of total
[Dollars in millions]			
Total .....	19,911	23	0.1%
Doctorate-granting institutions .....	19,540	-7	0.0
Non-doctorate-granting institutions .....	371	16	4.4

**NOTE:** Because of rounding, components may not add to totals. Percentages are calculated from unrounded figures.

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table A-3a. Imputed and/or estimated amount for the Academic Science and Engineering R&D Expenditures Survey at universities and colleges, by science and engineering field: FY 1993**

Page 1 of 1

Science and engineering field	Separately budgeted R&D expenditures	Amount imputed and/or estimated	Imputed and/or estimated as percent of total
[Dollars in millions]			
Total .....	19,911	23	0.1%
Engineering .....	3,151	39	1.2
Physical sciences .....	2,124	38	1.8
Environmental sciences .....	1,318	63	4.8
Mathematical sciences .....	272	3	1.0
Computer sciences ....	597	2	0.3
Life sciences .....	10,828	137	1.3
Psychology .....	349	8	2.2
Social sciences .....	896	12	1.3
Other sciences .....	375	3	0.8

**NOTE:** Because of rounding, components may not add to totals. Percentages are calculated from unrounded figures.

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table A-3b. Imputed and/or estimated amount of federally financed academic science and engineering R&D expenditures at universities and colleges, by science and engineering field: FY 1993**

Page 1 of 1

Science and engineering field	Federally financed R&D expenditures	Amount imputed and/or estimated	Imputed and/or estimated as percent of total
[Dollars in millions]			
Total .....	11,957	15	0.1%
Engineering .....	1,858	22	1.2
Physical sciences .....	1,513	27	1.8
Environmental sciences .....	870	47	5.4
Mathematical sciences .....	203	2	1.2
Computer sciences ....	422	1	0.3
Life sciences .....	6,383	90	1.4
Psychology .....	234	6	2.6
Social sciences .....	338	6	1.6
Other sciences .....	135	1	1.1

**NOTE:** Because of rounding, components may not add to totals. Percentages are calculated from unrounded figures.

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table A-4. Imputed and/or estimated amount for the Academic Science and Engineering  
R&D Expenditures Survey at universities and colleges,  
by source of funds: FY 1993**

Page 1 of 1

Source of funds	Separately budgeted R&D expenditures	Amount imputed and/or estimated	Imputed and/or estimated as percent of total
[Dollars in millions]			
Total .....	19,911	23	0.1%
Federal			
Government .....	11,957	15	0.3
State and local government .....	1,559	4	1.7
Industry .....	1,374	24	0.6
Institutional funds .....	3,552	23	0.2
All other sources .....	1,469	3	0.1

**NOTE:** Because of rounding, components may not add to totals. Percentages are calculated from unrounded figures.

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table A-5. Number of surveyed institutions for the Academic Science and Engineering R&D Expenditures Survey at all institutions, by type of institution and highest degree granted: FY 1988-93**

Page 1 of 1

Highest degree granted	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Grand total.....	574	477	478	478	480	700
Universities and colleges total .....	556	459	460	459	461	681
Doctorate .....	324	327	328	327	330	350
Master's .....	173	76	76	76	77	202
Bachelor's and no S&E degree .....	59	56	56	56	54	129
FFRDCs total .....	18	18	18	19	19	19

**NOTE:** Table reflects the actual number of institutions surveyed each year. Data in the Detailed Statistical Tables may reflect sample inflation to universe estimates.

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

## SECTION B.

### DETAILED STATISTICAL TABLES

### Note

To obtain accurate historical data, use only the latest detailed statistical tables for fiscal year (FY) 1993 and not data published earlier. Institutions revise prior-years' data when important changes occur in reporting practices and program classifications, and only the latest tables incorporate such changes.

## UNIVERSITIES AND COLLEGES

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**Table B-1. R&D expenditures at universities and colleges,  
by source of funds: fiscal years 1953-93**

[Dollars in millions]

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Fiscal year	Total	Source of funds				
		Federal Government	State and local governments	Industry	Institutional funds	All other sources
1953 .....	255	138	37	19	35	26
1954 .....	290	160	42	22	38	28
1955 .....	312	169	47	25	41	30
1956 .....	372	213	53	29	43	34
1957 .....	410	229	60	34	49	38
1958 .....	456	254	68	39	53	42
1959 .....	526	306	76	39	58	47
1960 .....	646	405	85	40	64	52
1961 .....	763	500	95	40	70	58
1962 .....	904	613	106	40	79	66
1963 .....	1,081	760	118	41	89	73
1964 .....	1,275	917	132	40	103	83
1965 .....	1,474	1,073	143	41	124	93
1966 .....	1,715	1,261	156	42	148	108
1967 .....	1,921	1,409	164	48	181	119
1968 .....	2,149	1,572	172	55	218	132
1969 .....	2,225	1,600	197	60	223	145
1970 .....	2,335	1,647	219	61	243	165
1971 .....	2,500	1,724	255	70	274	177
1972 .....	2,630	1,795	269	74	305	187
1973 .....	2,884	1,985	295	84	318	202
1974 .....	3,022	2,032	308	95	368	219
1975 .....	3,409	2,288	332	113	417	259
1976 .....	3,729	2,512	364	123	446	285
1977 .....	4,067	2,726	374	139	514	314
1978 <sup>1</sup> .....	4,625	3,059	414	170	623	359
1979 .....	5,366	3,598	472	193	735	368
1980 .....	6,063	4,098	491	236	835	403
1981 .....	6,847	4,571	546	291	1,004	435
1982 .....	7,323	4,768	616	337	1,111	491
1983 .....	7,881	4,989	626	389	1,302	576
1984 .....	8,620	5,430	690	475	1,411	614
1985 .....	9,686	6,063	752	560	1,617	694
1986 .....	10,927	6,710	915	700	1,869	733
1987 .....	12,152	7,342	1,023	790	2,169	828
1988 .....	13,462	8,191	1,106	872	2,356	936
1989 .....	14,975	8,988	1,223	995	2,698	1,071
1990 .....	16,283	9,634	1,324	1,128	3,006	1,192
1991 .....	17,577	10,230	1,473	1,205	3,362	1,307
1992 .....	18,794	11,090	1,491	1,291	3,527	1,395
1993 .....	19,911	11,957	1,559	1,374	3,552	1,469

<sup>1</sup> Fiscal year 1978 data are estimated based on data collected from doctorate-granting institutions only.

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-2. R&D expenditures at universities and colleges,  
by character of work: fiscal years 1953-93**

[Dollars in millions]

Page 1 of 1

Fiscal year	Total	Character of work			
		Basic research		Applied research and development	
		Amount	Percent of total	Amount	Percent of total
1953 .....	255	110	43.1	145	56.9
1954 .....	290	136	46.9	154	53.1
1955 .....	312	159	51.0	153	49.0
1956 .....	372	200	53.8	172	46.2
1957 .....	410	240	58.5	170	41.5
1958 .....	456	281	61.6	175	38.4
1959 .....	526	343	65.2	183	34.8
1960 .....	646	433	67.0	213	33.0
1961 .....	763	536	70.2	227	29.8
1962 .....	904	659	72.9	245	27.1
1963 .....	1,081	814	75.3	267	24.7
1964 .....	1,275	1,003	78.7	272	21.3
1965 .....	1,474	1,138	77.2	336	22.8
1966 .....	1,715	1,303	76.0	412	24.0
1967 .....	1,921	1,457	75.8	464	24.2
1968 .....	2,149	1,650	76.8	499	23.2
1969 .....	2,225	1,711	76.9	514	23.1
1970 .....	2,335	1,796	76.9	539	23.1
1971 .....	2,500	1,914	76.6	586	23.4
1972 .....	2,630	2,022	76.9	608	23.1
1973 .....	2,884	2,053	71.2	831	28.8
1974 .....	3,022	2,153	71.2	869	28.8
1975 .....	3,409	2,410	70.7	999	29.3
1976 .....	3,729	2,549	68.4	1,180	31.6
1977 .....	4,067	2,800	68.8	1,267	31.2
1978 <sup>1</sup> .....	4,625	--	--	--	--
1979 .....	5,366	3,619	67.4	1,747	32.6
1980 .....	6,063	4,036	66.6	2,026	33.4
1981 .....	6,847	4,593	67.1	2,253	32.9
1982 .....	7,323	4,878	66.6	2,445	33.4
1983 .....	7,881	5,303	67.3	2,578	32.7
1984 .....	8,620	5,732	66.5	2,887	33.5
1985 .....	9,686	6,555	67.7	3,131	32.3
1986 .....	10,927	7,491	68.6	3,436	31.4
1987 .....	12,152	8,391	69.1	3,761	30.9
1988 .....	13,462	8,893	66.1	4,570	33.9
1989 .....	14,975	9,789	65.4	5,186	34.6
1990 .....	16,283	10,640	65.3	5,644	34.7
1991 .....	17,577	11,601	66.0	5,976	34.0
1992 .....	18,794	12,504	66.5	6,290	33.5
1993 .....	19,911	13,270	66.6	6,642	33.4

<sup>1</sup> Separate data for basic research and applied research and development were not collected for fiscal year 1978.

**NOTE:** R&D expenditures by character of work are based on estimates of basic research provided by universities and colleges.

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-3. R&D expenditures at universities and colleges, by source of funds and science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Source and field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	19,911,352	18,794,482	17,576,602	16,283,302	14,974,810	13,462,275	12,152,051	10,926,992
Source of funds:								
Federal Government .....	11,957,140	11,089,625	10,229,811	9,634,248	8,987,745	8,191,193	7,341,679	6,710,372
State and local governments .....	1,558,947	1,490,674	1,473,321	1,323,745	1,223,236	1,106,378	1,023,452	915,152
Industry .....	1,373,957	1,291,352	1,204,628	1,127,702	994,859	872,288	790,093	699,690
Institutional funds .....	3,551,891	3,527,440	3,361,894	3,005,859	2,697,627	2,356,306	2,168,564	1,869,041
All other sources .....	1,469,417	1,395,391	1,306,948	1,191,748	1,071,343	936,110	828,263	732,737
Field:								
Engineering, total .....	3,151,298	3,059,686	2,902,514	2,656,327	2,392,253	2,096,098	1,891,746	1,640,734
Aeronautical and astronautical .....	206,218	196,120	179,859	163,377	148,310	122,814	108,150	94,422
Chemical .....	269,220	260,863	243,996	218,175	193,672	162,514	148,361	132,259
Civil .....	367,091	339,345	314,976	284,263	245,151	223,847	190,679	177,983
Electrical .....	696,243	702,458	679,088	662,890	594,851	509,123	450,834	394,867
Mechanical .....	480,294	452,137	420,849	390,608	342,988	303,501	274,872	227,986
Metallurgical and materials <sup>1</sup> .....	302,049	292,282	303,621	273,524	--	--	--	--
Other, n.e.c. ....	830,183	816,481	760,125	663,490	866,962	774,299	718,850	613,217
All sciences, total .....	16,760,054	15,734,796	14,674,088	13,626,975	12,582,557	11,366,177	10,260,305	9,286,258
Physical sciences .....	2,124,377	2,051,443	1,938,525	1,806,100	1,646,323	1,553,686	1,397,845	1,286,391
Astronomy .....	251,878	232,735	209,698	170,281	137,204	126,764	108,429	101,795
Chemistry .....	735,633	696,741	665,851	647,079	605,868	564,823	513,139	469,379
Physics .....	928,334	912,553	869,877	841,738	785,803	739,649	673,450	630,575
Other, n.e.c. ....	208,532	209,414	193,099	147,002	117,448	122,450	102,827	84,642
Environmental sciences .....	1,317,619	1,238,781	1,116,410	1,067,846	1,003,338	893,814	838,879	775,953
Atmospheric .....	211,611	194,098	174,555	173,288	165,254	138,353	132,355	120,551
Earth sciences .....	415,444	412,350	383,266	354,446	323,777	294,100	283,838	274,336
Oceanography .....	460,566	427,841	389,848	377,383	358,662	332,895	299,482	279,582
Other, n.e.c. ....	229,998	204,492	168,741	162,729	155,645	128,466	123,204	101,484
Mathematical sciences .....	272,133	247,487	230,104	221,676	214,583	198,863	177,246	151,561
Computer sciences .....	597,339	555,895	554,316	514,623	472,606	408,200	372,409	321,314
Life sciences .....	10,827,725	10,183,491	9,470,794	8,725,124	8,060,479	7,256,890	6,528,223	5,890,358
Agricultural sciences .....	1,558,090	1,512,300	1,458,432	1,349,302	1,282,033	1,176,233	1,120,748	1,089,352
Biological sciences .....	3,536,452	3,296,126	3,062,174	2,857,815	2,638,863	2,406,869	2,143,271	1,945,651
Medical sciences .....	5,285,269	4,959,579	4,546,641	4,154,650	3,818,958	3,377,754	3,000,425	2,615,678
Other, n.e.c. ....	447,914	415,486	403,547	363,357	320,625	296,034	263,779	239,677
Psychology .....	349,344	328,114	282,946	252,645	233,478	212,982	187,285	170,200
Social sciences .....	896,139	815,204	750,070	703,109	633,309	552,166	502,250	462,451
Economics .....	231,208	221,513	208,779	200,594	186,873	162,990	149,376	135,713
Political science .....	152,960	141,991	125,172	115,308	103,335	86,659	80,986	68,678
Sociology .....	183,562	163,288	155,666	131,895	119,140	108,352	95,159	95,817
Other, n.e.c. ....	328,409	268,412	260,453	255,312	223,961	194,165	176,729	162,243
Other sciences, n.e.c. ....	375,378	314,381	330,923	335,852	318,441	289,576	256,168	228,030

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-4. Federally financed R&D expenditures at universities and colleges,  
by science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	11,957,140	11,089,625	10,229,811	9,634,248	8,987,745	8,191,193	7,341,679	6,710,372
Engineering, total .....	1,858,216	1,752,149	1,637,777	1,525,696	1,383,643	1,229,533	1,112,645	977,560
Aeronautical and astronautical .....	158,871	150,440	137,323	126,904	114,881	93,681	80,168	72,671
Chemical .....	140,929	126,215	117,999	110,358	100,905	85,530	76,652	73,284
Civil .....	152,354	143,628	123,635	116,999	102,165	102,168	89,699	88,360
Electrical .....	458,102	449,459	435,877	431,820	386,619	330,379	292,216	260,340
Mechanical .....	309,956	270,514	251,313	238,199	214,126	192,647	178,483	148,001
Metallurgical and materials <sup>1</sup> .....	152,417	141,595	153,099	139,133	--	--	--	--
Other, n.e.c. ....	485,587	470,298	418,531	362,283	464,738	425,128	395,427	334,904
All sciences, total .....	10,098,924	9,337,476	8,592,034	8,108,552	7,604,102	6,961,660	6,229,034	5,732,812
Physical sciences .....	1,513,451	1,475,085	1,383,302	1,314,472	1,197,016	1,157,442	1,051,029	982,058
Astronomy .....	158,506	153,225	134,770	112,671	87,902	83,744	71,189	69,686
Chemistry .....	501,651	475,605	446,814	444,252	421,374	402,667	367,823	338,112
Physics .....	701,552	700,093	668,408	652,053	606,095	579,590	534,797	510,114
Other, n.e.c. ....	151,742	146,162	133,310	105,496	81,645	91,441	77,220	64,146
Environmental sciences .....	870,361	790,129	699,145	680,748	650,334	589,065	545,656	516,748
Atmospheric .....	160,405	139,994	129,384	131,110	128,806	112,318	108,585	97,946
Earth sciences .....	242,450	237,795	216,991	204,481	186,763	174,483	159,486	160,071
Oceanography .....	331,637	306,464	263,525	262,090	259,916	238,249	217,293	207,696
Other, n.e.c. ....	135,869	105,876	89,245	83,067	74,849	64,015	60,292	51,035
Mathematical sciences .....	203,004	183,048	170,479	160,856	157,281	149,959	131,952	114,359
Computer sciences .....	421,635	379,748	371,525	342,285	323,824	289,129	257,263	232,604
Life sciences .....	6,382,815	5,908,436	5,416,872	5,082,075	4,782,716	4,325,537	3,835,951	3,492,724
Agricultural sciences .....	449,710	417,741	377,281	352,804	349,450	322,446	297,658	292,422
Biological sciences .....	2,312,449	2,138,415	1,948,581	1,842,977	1,735,019	1,607,305	1,418,793	1,311,201
Medical sciences .....	3,351,137	3,112,369	2,848,718	2,671,462	2,502,676	2,212,997	1,961,800	1,742,129
Other, n.e.c. ....	269,519	239,911	242,292	214,832	195,571	182,789	157,700	146,972
Psychology .....	234,186	214,654	186,060	163,608	152,929	140,358	123,830	114,001
Social sciences .....	338,031	281,274	252,704	226,307	212,289	188,981	168,696	172,866
Economics .....	77,253	65,904	59,635	54,348	54,318	49,171	43,425	45,448
Political science .....	44,266	35,045	28,541	25,364	25,884	25,163	24,035	20,172
Sociology .....	91,092	81,727	72,044	60,017	53,916	47,782	43,940	49,100
Other, n.e.c. ....	125,420	98,598	92,484	86,578	78,171	66,865	57,296	58,146
Other sciences, n.e.c. ....	135,441	105,102	111,947	138,201	127,713	121,189	114,657	107,452

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-5. Non-Federal R&D expenditures at universities and colleges, by source of funds and science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

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Source and field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	7,954,212	7,704,857	7,346,791	6,649,054	5,987,065	5,271,082	4,810,372	4,216,620
Source of funds:								
State and local governments .....	1,558,947	1,490,674	1,473,321	1,323,745	1,223,236	1,106,378	1,023,452	915,152
Industry .....	1,373,957	1,291,352	1,204,628	1,127,702	994,859	872,288	790,093	699,690
Institutional funds .....	3,551,891	3,527,440	3,361,894	3,005,859	2,697,627	2,356,306	2,168,564	1,869,041
All other sources .....	1,469,417	1,395,391	1,306,948	1,191,748	1,071,343	936,110	828,263	732,737
Field:								
Engineering, total .....	1,293,082	1,307,537	1,264,737	1,130,631	1,008,610	866,565	779,101	663,174
Aeronautical and astronautical .....	47,347	45,680	42,536	36,473	33,429	29,133	27,982	21,751
Chemical .....	128,291	134,648	125,997	107,817	92,767	76,984	71,709	58,975
Civil .....	214,737	195,717	191,341	167,264	142,986	121,679	100,980	89,623
Electrical .....	238,141	252,999	243,211	231,070	208,232	178,744	158,618	134,527
Mechanical .....	170,338	181,623	169,536	152,409	128,862	110,854	96,389	79,985
Metallurgical and materials <sup>1</sup> .....	149,632	150,687	150,522	134,391	--	--	--	--
Other, n.e.c. ....	344,596	346,183	341,594	301,207	402,224	349,171	323,423	278,313
All sciences, total .....	6,661,130	6,397,320	6,082,054	5,518,423	4,978,455	4,404,517	4,031,271	3,553,446
Physical sciences .....	610,926	576,358	555,223	491,628	449,307	396,244	346,816	304,333
Astronomy .....	93,372	79,510	74,928	57,610	49,302	43,020	37,240	32,109
Chemistry .....	233,982	221,136	219,037	202,827	184,494	162,156	145,316	131,267
Physics .....	226,782	212,460	201,469	189,685	179,708	160,059	138,653	120,461
Other, n.e.c. ....	56,790	63,252	59,789	41,506	35,803	31,009	25,607	20,496
Environmental sciences .....	447,258	448,652	417,265	387,098	353,004	304,749	293,223	259,205
Atmospheric .....	51,206	54,104	45,171	42,178	36,448	26,035	23,770	22,605
Earth sciences .....	172,994	174,555	166,275	149,965	137,014	119,617	124,352	114,265
Oceanography .....	128,929	121,377	126,323	115,293	98,746	94,646	82,189	71,886
Other, n.e.c. ....	94,129	98,616	79,496	79,662	80,796	64,451	62,912	50,449
Mathematical sciences .....	69,129	64,439	59,625	60,820	57,302	48,904	45,294	37,202
Computer sciences .....	175,704	176,147	182,791	172,338	148,782	119,071	115,146	88,710
Life sciences .....	4,444,910	4,275,055	4,053,922	3,643,049	3,277,763	2,931,353	2,692,272	2,397,634
Agricultural sciences .....	1,108,380	1,094,559	1,081,151	996,498	932,583	853,787	823,090	796,930
Biological sciences .....	1,224,003	1,157,711	1,113,593	1,014,838	903,844	799,564	724,478	634,450
Medical sciences .....	1,934,132	1,847,210	1,697,923	1,483,168	1,316,282	1,164,757	1,038,625	873,549
Other, n.e.c. ....	178,395	175,575	161,255	148,525	125,054	113,245	106,079	92,705
Psychology .....	115,158	113,460	96,886	89,037	80,549	72,624	63,455	56,199
Social sciences .....	558,108	533,930	497,366	476,802	421,020	363,185	333,554	289,585
Economics .....	153,955	155,609	149,144	146,246	132,555	113,819	105,951	90,265
Political science .....	108,694	106,946	96,631	89,944	77,451	61,496	56,951	48,506
Sociology .....	92,470	81,561	83,622	71,878	65,224	60,570	51,219	46,717
Other, n.e.c. ....	202,989	189,814	167,969	168,734	145,790	127,300	119,433	104,097
Other sciences, n.e.c. ....	239,937	209,279	218,976	197,651	190,728	168,387	141,511	120,578

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

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**Table B-6. R&D expenditures at doctorate-granting institutions, by source of funds  
and science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

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Source and field	1993	1992	1991	1990	1989	1988	1987	1986
<b>Total .....</b>	<b>19,539,885</b>	<b>18,503,999</b>	<b>17,326,237</b>	<b>16,054,637</b>	<b>14,768,079</b>	<b>13,295,420</b>	<b>12,002,092</b>	<b>10,784,060</b>
<b>Source of funds:</b>								
Federal Government .....	11,727,394	10,907,991	10,072,332	9,489,429	8,856,963	8,088,351	7,250,487	6,620,967
State and local governments .....	1,523,317	1,462,465	1,449,486	1,299,635	1,202,637	1,089,990	1,006,841	900,623
Industry .....	1,343,830	1,266,715	1,185,402	1,110,474	978,635	858,512	777,062	688,569
Institutional funds .....	3,498,114	3,489,944	3,328,760	2,977,536	2,672,287	2,334,348	2,149,751	1,850,636
All other sources .....	1,447,230	1,376,884	1,290,257	1,177,763	1,057,557	924,219	817,951	723,265
<b>Field:</b>								
<b>Engineering, total .....</b>	<b>3,089,750</b>	<b>3,010,849</b>	<b>2,865,928</b>	<b>2,623,320</b>	<b>2,364,565</b>	<b>2,072,450</b>	<b>1,872,914</b>	<b>1,623,254</b>
Aeronautical and astronautical .....	200,395	192,186	176,341	160,558	145,622	121,612	106,994	93,345
Chemical .....	267,162	259,066	242,434	216,564	191,835	160,384	147,077	131,088
Civil .....	356,048	332,431	308,548	279,523	241,241	221,431	187,709	175,289
Electrical .....	682,918	692,240	672,063	656,953	589,070	503,982	446,911	391,062
Mechanical .....	467,215	439,751	412,314	383,739	337,589	298,728	270,803	224,545
Metallurgical and materials <sup>1</sup> .....	300,661	291,057	302,912	272,943	--	--	--	--
Other, n.e.c. ....	815,351	804,118	751,316	653,040	859,208	766,313	713,420	607,925
<b>All sciences, total .....</b>	<b>16,450,135</b>	<b>15,493,150</b>	<b>14,460,309</b>	<b>13,431,517</b>	<b>12,403,514</b>	<b>11,222,970</b>	<b>10,129,178</b>	<b>9,160,806</b>
<b>Physical sciences .....</b>	<b>2,057,390</b>	<b>1,996,319</b>	<b>1,889,976</b>	<b>1,762,604</b>	<b>1,607,752</b>	<b>1,520,084</b>	<b>1,366,620</b>	<b>1,256,163</b>
Astronomy .....	250,902	231,859	208,875	169,539	136,552	126,037	107,840	101,191
Chemistry .....	698,889	665,274	637,368	622,692	583,861	546,501	496,258	452,826
Physics .....	901,466	890,955	852,012	824,678	771,426	726,407	661,383	619,215
Other, n.e.c. ....	206,133	208,231	191,721	145,695	115,913	121,139	101,139	82,931
<b>Environmental sciences .....</b>	<b>1,274,199</b>	<b>1,211,812</b>	<b>1,093,931</b>	<b>1,046,149</b>	<b>984,480</b>	<b>878,193</b>	<b>821,494</b>	<b>759,515</b>
Atmospheric .....	207,397	191,002	170,864	169,690	161,820	134,978	129,393	118,086
Earth sciences .....	401,759	403,062	375,903	347,638	318,428	289,271	278,188	269,403
Oceanography .....	443,229	419,863	383,390	371,466	353,177	329,579	295,765	275,988
Other, n.e.c. ....	221,814	197,885	163,774	157,355	151,055	124,365	118,148	96,038
<b>Mathematical sciences .....</b>	<b>258,138</b>	<b>238,256</b>	<b>222,263</b>	<b>216,090</b>	<b>209,535</b>	<b>195,064</b>	<b>173,852</b>	<b>147,519</b>
<b>Computer sciences .....</b>	<b>585,750</b>	<b>544,272</b>	<b>544,626</b>	<b>506,233</b>	<b>465,244</b>	<b>400,627</b>	<b>365,472</b>	<b>315,769</b>
<b>Life sciences .....</b>	<b>10,712,399</b>	<b>10,087,125</b>	<b>9,383,659</b>	<b>8,639,179</b>	<b>7,978,323</b>	<b>7,197,161</b>	<b>6,480,006</b>	<b>5,843,160</b>
Agricultural sciences .....	1,514,977	1,472,616	1,421,786	1,316,343	1,250,324	1,156,312	1,102,095	1,070,786
Biological sciences .....	3,477,745	3,249,010	3,020,780	2,812,608	2,596,530	2,373,811	2,118,936	1,922,267
Medical sciences .....	5,277,556	4,954,141	4,541,298	4,150,372	3,813,724	3,373,887	2,997,088	2,612,760
Other, n.e.c. ....	442,121	411,358	399,795	359,856	317,745	293,151	261,887	237,347
<b>Psychology .....</b>	<b>331,527</b>	<b>315,318</b>	<b>271,825</b>	<b>242,396</b>	<b>224,844</b>	<b>205,679</b>	<b>181,071</b>	<b>164,814</b>
<b>Social sciences .....</b>	<b>869,229</b>	<b>793,103</b>	<b>729,759</b>	<b>688,372</b>	<b>619,143</b>	<b>539,512</b>	<b>488,446</b>	<b>448,983</b>
Economics .....	225,727	216,010	203,762	198,004	184,602	160,790	147,508	133,532
Political science .....	150,289	140,613	124,002	114,127	102,123	85,027	79,624	67,314
Sociology .....	176,532	157,326	149,507	127,205	115,098	105,426	90,984	91,939
Other, n.e.c. ....	316,681	279,154	252,488	249,036	217,320	188,269	170,330	156,198
<b>Other sciences, n.e.c. ....</b>	<b>361,503</b>	<b>306,945</b>	<b>324,270</b>	<b>330,494</b>	<b>314,193</b>	<b>286,650</b>	<b>252,217</b>	<b>224,883</b>

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-7. Federally financed R&D expenditures at doctorate-granting institutions,  
by science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

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Field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	11,727,394	10,907,991	10,072,332	9,489,429	8,856,963	8,088,351	7,250,487	6,620,967
Engineering, total .....	1,823,717	1,726,956	1,617,387	1,506,452	1,367,805	1,218,071	1,103,228	968,303
Aeronautical and astronautical .....	153,414	146,700	133,994	124,189	112,402	92,575	79,125	71,692
Chemical .....	139,793	125,269	117,174	109,468	99,571	84,023	75,855	72,378
Civil .....	147,987	141,074	121,168	114,954	100,511	101,244	88,095	86,860
Electrical .....	449,334	443,089	431,831	428,209	383,343	328,240	290,544	258,594
Mechanical .....	302,341	263,233	245,681	233,676	210,887	189,825	176,190	146,060
Metallurgical and materials <sup>1</sup> .....	151,568	140,866	152,626	138,735	--	--	--	--
Other, n.e.c. ....	479,280	466,725	414,913	357,221	461,091	422,164	393,419	332,719
All sciences, total .....	9,903,677	9,181,035	8,454,945	7,982,977	7,489,158	6,870,280	6,147,259	5,652,664
Physical sciences .....	1,468,941	1,436,570	1,349,538	1,284,822	1,170,239	1,133,842	1,029,328	961,081
Astronomy .....	157,757	152,579	134,167	112,121	87,420	83,225	70,798	69,291
Chemistry .....	476,606	452,785	426,718	427,453	406,294	389,901	356,541	326,818
Physics .....	684,069	685,835	656,164	640,440	595,740	569,854	525,452	501,295
Other, n.e.c. ....	150,509	145,371	132,489	104,808	80,785	90,862	76,537	63,677
Environmental sciences .....	845,989	776,117	686,569	668,587	638,498	579,250	535,542	506,882
Atmospheric .....	157,013	137,562	126,544	128,261	125,792	109,161	105,758	95,643
Earth sciences .....	235,970	233,662	213,588	201,256	184,177	172,163	156,692	157,911
Oceanography .....	321,831	302,618	260,083	258,499	256,442	236,366	215,895	206,185
Other, n.e.c. ....	131,175	102,275	86,354	80,571	72,087	61,560	57,197	47,143
Mathematical sciences .....	194,323	177,372	165,600	157,254	153,963	147,388	129,605	111,508
Computer sciences .....	414,190	371,851	364,867	336,829	319,175	283,892	253,127	229,170
Life sciences .....	6,304,547	5,840,998	5,358,265	5,023,915	4,728,044	4,287,360	3,805,133	3,460,845
Agricultural sciences .....	419,596	388,158	351,071	329,008	326,052	307,639	285,085	278,978
Biological sciences .....	2,273,769	2,106,370	1,921,653	1,813,841	1,708,967	1,588,571	1,404,152	1,296,856
Medical sciences .....	3,346,239	3,108,834	2,845,620	2,668,744	2,499,081	2,210,467	1,959,434	1,739,955
Other, n.e.c. ....	264,943	237,636	239,921	212,322	193,944	180,683	156,462	145,056
Psychology .....	220,443	204,888	177,343	155,932	146,689	135,113	119,317	110,172
Social sciences .....	326,356	271,792	243,579	219,699	206,897	183,593	163,238	167,477
Economics .....	73,636	62,450	56,653	53,092	53,423	48,127	42,691	44,481
Political science .....	43,761	34,520	28,021	24,913	25,362	24,516	23,482	19,650
Sociology .....	87,547	78,391	68,602	57,388	52,059	46,413	41,675	47,237
Other, n.e.c. ....	121,412	96,431	90,303	84,306	76,053	64,537	55,390	56,109
Other sciences, n.e.c. ....	128,888	101,447	109,184	135,939	125,653	119,842	111,969	105,529

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-8. Non-Federal R&D expenditures at doctorate-granting institutions, by source of funds and science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Source and field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	7,812,491	7,596,008	7,253,905	6,565,408	5,911,116	5,207,069	4,751,605	4,163,093
Source of funds:								
State and local governments .....	1,523,317	1,462,465	1,449,486	1,299,635	1,202,637	1,089,990	1,006,841	900,623
Industry .....	1,343,830	1,266,715	1,185,402	1,110,474	978,635	858,512	777,062	688,569
Institutional funds .....	3,498,114	3,489,944	3,328,760	2,977,536	2,672,287	2,334,348	2,149,751	1,850,636
All other sources .....	1,447,230	1,376,884	1,290,257	1,177,763	1,057,557	924,219	817,951	723,265
Field:								
Engineering, total .....	1,266,033	1,283,893	1,248,541	1,116,868	996,760	854,379	769,686	654,951
Aeronautical and astronautical .....	46,981	45,486	42,347	36,369	33,220	29,037	27,869	21,653
Chemical .....	127,369	133,797	125,260	107,096	92,264	76,361	71,222	58,710
Civil .....	208,061	191,357	187,380	164,569	140,730	120,187	99,614	88,429
Electrical .....	233,584	249,151	240,232	228,744	205,727	175,742	156,367	132,468
Mechanical .....	164,874	176,518	166,633	150,063	126,702	108,903	94,613	78,485
Metallurgical and materials <sup>1</sup> .....	149,093	150,191	150,286	134,208	--	--	--	--
Other, n.e.c. ....	336,071	337,393	336,403	295,819	398,117	344,149	320,001	275,206
All sciences, total .....	6,546,458	6,312,115	6,005,364	5,448,540	4,914,356	4,352,690	3,981,919	3,508,142
Physical sciences .....	588,449	559,749	540,438	477,782	437,513	386,242	337,292	295,082
Astronomy .....	93,145	79,280	74,708	57,418	49,132	42,812	37,042	31,900
Chemistry .....	222,283	212,489	210,650	195,239	177,567	156,600	139,717	126,008
Physics .....	217,397	205,120	195,848	184,238	175,686	156,553	135,931	117,920
Other, n.e.c. ....	55,624	62,860	59,232	40,887	35,128	30,277	24,602	19,254
Environmental sciences .....	428,210	435,695	407,362	377,562	345,982	298,943	285,952	252,633
Atmospheric .....	50,384	53,440	44,320	41,429	36,028	25,817	23,635	22,443
Earth sciences .....	165,789	169,400	162,315	146,382	134,251	117,108	121,496	111,492
Oceanography .....	121,398	117,245	123,307	112,967	96,735	93,213	79,870	69,803
Other, n.e.c. ....	90,639	95,610	77,420	76,784	78,968	62,805	60,951	48,895
Mathematical sciences .....	63,815	60,884	56,663	58,836	55,572	47,676	44,247	36,011
Computer sciences .....	171,560	172,421	179,759	169,404	146,069	116,735	112,345	86,599
Life sciences .....	4,407,852	4,246,127	4,025,394	3,615,264	3,250,279	2,909,801	2,674,873	2,382,315
Agricultural sciences .....	1,095,381	1,084,458	1,070,715	987,335	924,272	848,673	817,010	791,808
Biological sciences .....	1,203,976	1,142,640	1,099,127	998,767	887,563	785,240	714,784	625,411
Medical sciences .....	1,931,317	1,845,307	1,695,678	1,481,628	1,314,643	1,163,420	1,037,654	872,805
Other, n.e.c. ....	177,178	173,722	159,874	147,534	123,801	112,468	105,425	92,291
Psychology .....	111,084	110,430	94,482	86,464	78,155	70,566	61,754	54,642
Social sciences .....	542,873	521,311	486,180	468,673	412,246	355,919	325,208	281,506
Economics .....	152,091	153,560	147,109	144,912	131,179	112,663	104,817	89,051
Political science .....	106,528	106,093	95,981	89,214	76,761	60,511	56,142	47,664
Sociology .....	88,985	78,935	80,905	69,817	63,039	59,013	49,309	44,702
Other, n.e.c. ....	195,269	182,723	162,185	164,730	141,267	123,732	114,940	100,089
Other sciences, n.e.c. ....	232,615	205,498	215,086	194,555	188,540	166,808	140,248	119,354

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

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**Table B-9. R&D expenditures at public universities and colleges, by source of funds and science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Source and field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	13,368,412	12,547,297	11,738,023	10,760,486	9,810,788	8,770,364	7,900,880	7,110,785
Source of funds:								
Federal Government .....	7,173,300	6,600,346	6,050,994	5,622,785	5,193,704	4,712,850	4,179,637	3,839,784
State and local governments .....	1,416,337	1,352,807	1,330,815	1,190,362	1,099,995	995,682	926,515	831,576
Industry .....	896,707	843,630	789,303	733,549	632,939	546,505	494,293	439,944
Institutional funds .....	2,975,005	2,906,764	2,784,551	2,507,773	2,246,079	1,955,897	1,802,620	1,550,223
All other sources .....	907,063	843,750	782,360	706,017	638,071	559,430	497,815	449,258
Field:								
Engineering, total .....	2,112,914	2,034,389	1,959,282	1,761,687	1,550,162	1,335,176	1,167,814	1,005,097
Aeronautical and astronautical .....	124,888	119,334	108,472	94,825	81,856	66,807	52,807	44,475
Chemical .....	179,473	173,121	154,365	143,080	120,640	102,300	91,988	83,520
Civil .....	300,089	274,003	256,853	229,018	192,697	170,322	144,496	137,529
Electrical .....	418,081	425,076	417,616	402,947	358,440	298,925	250,796	218,121
Mechanical .....	289,191	276,383	264,297	244,051	206,904	184,114	157,125	128,706
Metallurgical and materials <sup>1</sup> .....	225,046	210,856	228,370	199,757	--	--	--	--
Other, n.e.c. ....	576,146	555,616	529,309	448,009	589,398	512,708	470,602	392,746
All sciences, total .....	11,255,498	10,512,908	9,778,741	8,998,799	8,260,626	7,435,188	6,733,066	6,105,688
Physical sciences .....	1,378,245	1,289,356	1,219,040	1,123,569	1,014,987	936,902	836,948	753,795
Astronomy .....	174,596	154,264	142,843	113,828	95,944	88,361	76,175	69,560
Chemistry .....	498,692	466,420	442,035	415,435	389,037	362,107	330,203	297,333
Physics .....	572,380	559,995	527,433	509,661	464,811	424,769	380,257	349,561
Other, n.e.c. ....	132,577	108,677	106,729	84,645	65,195	61,665	50,313	37,341
Environmental sciences .....	1,033,163	963,965	848,680	811,728	739,916	668,515	636,098	583,846
Atmospheric .....	176,750	161,280	143,964	142,609	131,530	111,545	112,497	100,724
Earth sciences .....	314,283	309,193	283,627	260,108	232,368	212,108	207,492	202,196
Oceanography .....	375,544	345,501	308,159	300,488	272,739	261,763	233,217	212,658
Other, n.e.c. ....	166,586	147,991	112,930	108,523	103,279	83,099	82,892	68,268
Mathematical sciences .....	157,645	145,439	135,185	128,714	120,492	108,775	100,077	82,889
Computer sciences .....	292,667	284,461	293,018	249,725	209,018	170,421	167,067	139,303
Life sciences .....	7,220,133	6,770,622	6,271,015	5,725,901	5,310,584	4,768,110	4,290,105	3,907,843
Agricultural sciences .....	1,510,636	1,466,962	1,408,057	1,301,176	1,233,725	1,132,524	1,080,287	1,050,743
Biological sciences .....	2,260,708	2,068,423	1,939,785	1,779,741	1,642,556	1,491,129	1,330,471	1,228,745
Medical sciences .....	3,178,961	2,981,655	2,666,455	2,418,823	2,230,100	1,957,292	1,707,830	1,473,398
Other, n.e.c. ....	269,828	253,582	256,718	226,161	204,203	187,165	171,517	154,957
Psychology .....	242,873	226,746	195,691	169,688	156,549	140,599	123,547	113,866
Social sciences .....	663,913	595,555	565,819	525,336	455,947	403,440	363,746	339,993
Economics .....	187,136	174,563	160,828	150,156	136,931	119,609	114,249	106,896
Political science .....	90,251	80,652	80,369	75,908	61,304	52,467	50,104	45,868
Sociology .....	135,002	116,456	111,799	93,788	79,506	71,796	58,767	61,094
Other, n.e.c. ....	251,524	223,884	212,823	205,484	178,206	159,568	140,626	126,135
Other sciences, n.e.c. ....	266,859	236,764	250,293	264,138	253,133	238,426	215,478	184,153

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-10. Federally financed R&D expenditures at public universities and colleges,  
by science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	7,173,300	6,600,346	6,050,994	5,622,785	5,193,704	4,712,850	4,179,637	3,839,784
Engineering, total .....	1,071,837	1,009,159	961,715	877,606	766,021	672,547	571,023	500,786
Aeronautical and astronautical .....	88,410	85,175	77,107	69,668	60,244	47,462	33,603	30,110
Chemical .....	86,518	76,363	67,900	64,589	55,077	49,409	42,710	42,953
Civil .....	109,805	103,035	90,134	84,597	71,120	68,518	58,724	62,842
Electrical .....	240,906	243,307	245,133	242,531	212,100	172,932	140,219	123,657
Mechanical .....	159,233	141,394	134,035	127,408	109,137	101,821	89,017	71,946
Metallurgical and materials <sup>1</sup> .....	103,321	90,226	106,545	93,564	--	--	--	--
Other, n.e.c. ....	283,644	269,659	240,861	195,249	258,134	232,405	206,750	169,278
All sciences, total .....	6,101,463	5,591,187	5,089,279	4,745,179	4,427,683	4,040,303	3,608,614	3,338,998
Physical sciences .....	892,430	841,259	781,711	740,321	666,904	629,804	567,846	523,848
Astronomy .....	99,171	90,094	82,895	68,263	55,261	53,198	46,780	45,323
Chemistry .....	319,740	299,553	275,720	266,985	256,541	244,297	222,335	202,251
Physics .....	390,036	388,836	364,714	355,739	321,027	296,999	270,179	255,873
Other, n.e.c. ....	83,483	62,776	58,382	49,334	34,075	35,310	28,552	20,401
Environmental sciences .....	631,078	561,389	477,049	465,770	430,157	403,189	376,387	358,707
Atmospheric .....	128,229	110,496	102,511	104,039	99,212	89,128	90,661	80,548
Earth sciences .....	160,084	153,968	135,099	123,790	111,331	106,994	96,191	100,635
Oceanography .....	254,167	232,437	190,583	193,490	182,444	175,252	158,049	149,404
Other, n.e.c. ....	88,598	64,488	48,856	44,451	37,170	31,815	31,486	28,120
Mathematical sciences .....	100,970	92,486	86,205	78,329	73,202	67,434	60,743	50,663
Computer sciences .....	165,934	160,738	162,324	125,698	109,511	94,145	91,983	82,677
Life sciences .....	3,811,186	3,513,110	3,184,473	2,950,359	2,801,602	2,530,777	2,229,485	2,047,329
Agricultural sciences .....	433,034	403,692	364,585	341,229	337,291	312,016	286,680	282,404
Biological sciences .....	1,339,702	1,216,175	1,112,941	1,028,809	981,434	904,228	798,193	746,707
Medical sciences .....	1,896,723	1,765,788	1,568,087	1,461,732	1,371,695	1,208,741	1,053,862	934,416
Other, n.e.c. ....	141,727	127,455	138,860	118,589	111,182	105,792	90,750	83,802
Psychology .....	158,278	144,852	124,118	103,448	96,354	86,841	75,993	71,614
Social sciences .....	243,413	199,750	187,442	166,952	145,484	128,436	109,386	115,003
Economics .....	66,228	55,716	49,035	44,055	41,368	35,561	32,331	35,094
Political science .....	23,639	17,969	15,837	14,121	12,913	12,616	12,297	12,066
Sociology .....	64,173	54,759	47,385	38,975	32,149	29,043	23,999	27,801
Other, n.e.c. ....	89,373	71,306	75,185	69,801	59,054	51,216	40,759	40,042
Other sciences, n.e.c. ....	98,174	77,603	85,957	114,302	104,469	99,677	96,791	89,157

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-11. Non-Federal R&D expenditures at public universities and colleges,  
by source of funds and science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

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Source and field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	6,195,112	5,946,951	5,687,029	5,137,701	4,617,084	4,057,514	3,721,243	3,271,001
Source of funds:								
State and local governments .....	1,416,337	1,352,807	1,330,815	1,190,362	1,099,995	995,682	926,515	831,576
Industry .....	896,707	843,630	789,303	733,549	632,939	546,505	494,293	439,944
Institutional funds .....	2,975,005	2,906,764	2,784,551	2,507,773	2,246,079	1,955,897	1,802,620	1,550,223
All other sources .....	907,063	843,750	782,360	706,017	638,071	559,430	497,815	449,258
Field:								
Engineering, total .....	1,041,077	1,025,230	997,567	884,081	784,141	662,629	596,791	504,311
Aeronautical and astronautical .....	36,478	34,159	31,365	25,157	21,612	19,345	19,204	14,365
Chemical .....	92,955	96,758	86,465	78,491	65,563	52,891	49,278	40,567
Civil .....	190,284	170,968	166,719	144,421	121,577	101,804	85,772	74,687
Electrical .....	177,175	181,769	172,483	160,416	146,340	125,993	110,577	94,464
Mechanical .....	129,958	134,989	130,262	116,643	97,767	82,293	68,108	56,760
Metallurgical and materials <sup>1</sup> .....	121,725	120,630	121,825	106,193	--	--	--	--
Other, n.e.c. ....	292,502	285,957	288,448	252,760	331,264	280,303	263,852	223,468
All sciences, total .....	5,154,035	4,921,721	4,689,462	4,253,620	3,832,943	3,394,885	3,124,452	2,766,690
Physical sciences .....	485,815	448,097	437,329	383,248	348,083	307,098	269,102	229,947
Astronomy .....	75,425	64,170	59,948	45,565	40,683	35,163	29,395	24,237
Chemistry .....	178,952	166,867	166,315	148,450	132,496	117,810	107,868	95,082
Physics .....	182,344	171,159	162,719	153,922	143,784	127,770	110,078	93,688
Other, n.e.c. ....	49,094	45,901	48,347	35,311	31,120	26,355	21,761	16,940
Environmental sciences .....	402,085	402,576	371,631	345,958	309,759	265,326	259,711	225,139
Atmospheric .....	48,521	50,784	41,453	38,570	32,318	22,417	21,836	20,176
Earth sciences .....	154,199	155,225	148,528	136,318	121,037	105,114	111,301	101,561
Oceanography .....	121,377	113,064	117,576	106,998	90,295	86,511	75,168	63,254
Other, n.e.c. ....	77,988	83,503	64,074	64,072	66,109	51,284	51,406	40,148
Mathematical sciences .....	56,675	52,953	48,980	50,385	47,290	41,341	39,334	32,226
Computer sciences .....	126,733	123,723	130,694	124,027	99,507	76,276	75,084	56,626
Life sciences .....	3,408,947	3,257,512	3,086,542	2,775,542	2,508,982	2,237,333	2,060,620	1,860,514
Agricultural sciences .....	1,077,602	1,063,270	1,043,472	959,947	896,434	820,508	793,607	768,339
Biological sciences .....	921,006	852,248	826,844	750,932	661,122	586,901	532,278	482,038
Medical sciences .....	1,282,238	1,215,867	1,098,368	957,091	858,405	748,551	653,968	538,982
Other, n.e.c. ....	128,101	126,127	117,858	107,572	93,021	81,373	80,767	71,155
Psychology .....	84,595	81,894	71,573	66,240	60,195	53,758	47,554	42,252
Social sciences .....	420,500	395,805	378,377	358,384	310,463	275,004	254,360	224,990
Economics .....	120,908	118,847	111,793	106,101	95,563	84,048	81,918	71,802
Political science .....	66,612	62,683	64,532	61,787	48,391	39,851	37,807	33,802
Sociology .....	70,829	61,697	64,414	54,813	47,357	42,753	34,768	33,293
Other, n.e.c. ....	162,151	152,578	137,638	135,683	119,152	108,352	99,867	86,093
Other sciences, n.e.c. ....	168,685	159,161	164,336	149,836	148,664	138,749	118,687	94,996

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

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**Table B-12. R&D expenditures at private universities and colleges, by source of funds and science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Source and field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	6,542,940	6,247,185	5,838,579	5,522,816	5,164,022	4,691,911	4,251,171	3,816,207
Source of funds:								
Federal Government .....	4,783,840	4,489,279	4,178,817	4,011,463	3,794,041	3,478,343	3,162,042	2,870,588
State and local governments .....	142,610	137,867	142,506	133,383	123,241	110,696	96,937	83,576
Industry .....	477,250	447,722	415,325	394,153	361,920	325,783	295,800	259,746
Institutional funds .....	576,886	620,676	577,343	498,086	451,548	400,409	365,944	318,818
All other sources .....	562,354	551,641	524,588	485,731	433,272	376,680	330,448	283,479
Field:								
Engineering, total .....	1,038,384	1,025,297	943,232	894,640	842,091	760,922	723,932	635,637
Aeronautical and astronautical .....	81,330	76,786	71,387	68,552	66,454	56,007	55,343	49,947
Chemical .....	89,747	87,742	89,631	75,095	73,032	60,214	56,373	48,739
Civil .....	67,002	65,342	58,123	55,245	52,454	53,525	46,183	40,454
Electrical .....	278,162	277,382	261,472	259,943	236,411	210,198	200,038	176,746
Mechanical .....	191,103	175,754	156,552	146,557	136,084	119,387	117,747	99,280
Metallurgical and materials <sup>1</sup> .....	77,003	81,426	75,251	73,767	--	--	--	--
Other, n.e.c. ....	254,037	260,865	230,816	215,481	277,564	261,591	248,248	220,471
All sciences, total .....	5,504,556	5,221,888	4,895,347	4,628,176	4,321,931	3,930,989	3,527,239	3,180,570
Physical sciences .....	746,132	762,087	719,485	682,531	631,336	616,784	560,897	532,596
Astronomy .....	77,282	78,471	66,855	56,453	41,260	38,403	32,254	32,235
Chemistry .....	236,941	230,321	223,816	231,644	216,831	202,716	182,936	172,046
Physics .....	355,954	352,558	342,444	332,077	320,992	314,880	293,193	281,014
Other, n.e.c. ....	75,955	100,737	86,370	62,357	52,253	60,785	52,514	47,301
Environmental sciences .....	284,456	274,816	267,730	256,118	263,422	225,299	202,781	192,107
Atmospheric .....	34,861	32,818	30,591	30,679	33,724	26,808	19,858	19,827
Earth sciences .....	101,161	103,157	99,639	94,338	91,409	81,992	76,346	72,140
Oceanography .....	85,022	82,340	81,689	76,895	85,923	71,132	66,265	66,924
Other, n.e.c. ....	63,412	56,501	55,811	54,206	52,366	45,367	40,312	33,216
Mathematical sciences .....	114,488	102,048	94,919	92,962	94,091	90,088	77,169	68,672
Computer sciences .....	304,672	271,434	261,298	264,898	263,588	237,779	205,342	182,011
Life sciences .....	3,607,592	3,412,869	3,199,779	2,999,223	2,749,895	2,488,780	2,238,118	1,982,515
Agricultural sciences .....	47,454	45,338	50,375	48,126	48,308	43,709	40,461	38,609
Biological sciences .....	1,275,744	1,227,703	1,122,389	1,078,074	996,307	915,740	812,800	716,906
Medical sciences .....	2,106,308	1,977,924	1,880,186	1,735,827	1,588,858	1,420,462	1,292,595	1,142,280
Other, n.e.c. ....	178,086	161,904	146,829	137,196	116,422	108,869	92,262	84,720
Psychology .....	106,471	101,368	87,255	82,957	76,929	72,383	63,738	56,334
Social sciences .....	232,226	219,649	184,251	177,773	177,362	148,726	138,504	122,458
Economics .....	44,072	46,950	47,951	50,438	49,942	43,381	35,127	28,817
Political science .....	62,709	61,339	44,803	39,400	42,031	34,192	30,882	22,810
Sociology .....	48,560	46,832	43,867	38,107	39,634	36,556	36,392	34,723
Other, n.e.c. ....	76,885	64,528	47,630	49,828	45,755	34,597	36,103	36,108
Other sciences, n.e.c. ....	108,519	77,617	80,630	71,714	65,308	51,150	40,690	43,877

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-13. Federally financed R&D expenditures at private universities and colleges,  
by science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	4,783,840	4,489,279	4,178,817	4,011,463	3,794,041	3,478,343	3,162,042	2,870,588
Engineering, total .....	786,379	742,990	676,062	648,090	617,622	556,986	541,622	476,774
Aeronautical and astronautical .....	70,461	65,265	60,216	57,236	54,637	46,219	46,565	42,561
Chemical .....	54,411	49,852	50,099	45,769	45,828	36,121	33,942	30,331
Civil .....	42,549	40,593	33,501	32,402	31,045	33,650	30,975	25,518
Electrical .....	217,196	206,152	190,744	189,289	174,519	157,447	151,997	136,683
Mechanical .....	150,723	129,120	117,278	110,791	104,989	90,826	89,466	76,055
Metallurgical and materials <sup>1</sup> .....	49,096	51,369	46,554	45,569	--	--	--	--
Other, n.e.c. ....	201,943	200,639	177,670	167,034	206,604	192,723	188,677	165,626
All sciences, total .....	3,997,461	3,746,289	3,502,755	3,363,373	3,176,419	2,921,357	2,620,420	2,393,814
Physical sciences .....	621,021	633,826	601,591	574,151	530,112	527,638	483,183	458,210
Astronomy .....	59,335	63,131	51,875	44,408	32,641	30,546	24,409	24,363
Chemistry .....	181,911	176,052	171,094	177,267	164,833	158,370	145,488	135,861
Physics .....	311,516	311,257	303,694	296,314	285,068	282,591	264,618	254,241
Other, n.e.c. ....	68,259	83,386	74,928	56,162	47,570	56,131	48,668	43,745
Environmental sciences .....	239,283	228,740	222,096	214,978	220,177	185,876	169,269	158,041
Atmospheric .....	32,176	29,498	26,873	27,071	29,594	23,190	17,924	17,398
Earth sciences .....	82,366	83,827	81,892	80,691	75,432	67,489	63,295	59,436
Oceanography .....	77,470	74,027	72,942	68,600	77,472	62,997	59,244	58,292
Other, n.e.c. ....	47,271	41,388	40,389	38,616	37,679	32,200	28,806	22,915
Mathematical sciences .....	102,034	90,562	84,274	82,527	84,079	82,525	71,209	63,696
Computer sciences .....	255,701	219,010	209,201	216,587	214,313	194,984	165,280	149,927
Life sciences .....	2,571,629	2,395,326	2,232,399	2,131,716	1,981,114	1,794,760	1,606,466	1,445,395
Agricultural sciences .....	16,676	14,049	12,696	11,575	12,159	10,430	10,978	10,018
Biological sciences .....	972,747	922,240	835,640	814,168	753,585	703,077	620,600	564,494
Medical sciences .....	1,454,414	1,346,581	1,280,631	1,209,730	1,130,981	1,004,256	907,938	807,713
Other, n.e.c. ....	127,792	112,456	103,432	96,243	84,389	76,997	66,950	63,170
Psychology .....	75,908	69,802	61,942	60,160	56,575	53,517	47,837	42,387
Social sciences .....	94,618	81,524	65,262	59,355	66,805	60,545	59,310	57,863
Economics .....	11,025	10,188	10,600	10,293	12,950	13,610	11,094	10,354
Political science .....	20,627	17,076	12,704	11,243	12,971	12,547	11,738	8,106
Sociology .....	26,919	26,968	24,659	21,042	21,767	18,739	19,941	21,299
Other, n.e.c. ....	36,047	27,292	17,299	16,777	19,117	15,649	16,537	18,104
Other sciences, n.e.c. ....	37,267	27,499	25,990	23,899	23,244	21,512	17,866	18,295

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-14. Non-Federal R&D expenditures at private universities and colleges,  
by source of funds and science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

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Source and field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	1,759,100	1,757,906	1,659,762	1,511,353	1,369,981	1,213,568	1,089,129	945,619
Source of funds:								
State and local governments .....	142,610	137,867	142,506	133,383	123,241	110,696	96,937	83,576
Industry .....	477,250	447,722	415,325	394,153	361,920	325,783	295,800	259,746
Institutional funds .....	576,886	620,676	577,343	498,086	451,548	400,409	365,944	318,818
All other sources .....	562,354	551,641	524,588	485,731	433,272	376,680	330,448	283,479
Field:								
Engineering, total .....	252,005	282,307	267,170	246,550	224,469	203,936	182,310	158,863
Aeronautical and astronautical .....	10,869	11,521	11,171	11,316	11,817	9,788	8,778	7,386
Chemical .....	35,336	37,890	39,532	29,326	27,204	24,093	22,431	18,408
Civil .....	24,453	24,749	24,622	22,843	21,409	19,875	15,208	14,936
Electrical .....	60,966	71,230	70,728	70,654	61,892	52,751	48,041	40,063
Mechanical .....	40,380	46,634	39,274	35,766	31,095	28,561	28,281	23,225
Metallurgical and materials <sup>1</sup> .....	27,907	30,057	28,697	28,198	--	--	--	--
Other, n.e.c. ....	52,094	60,226	53,146	48,447	70,960	68,868	59,571	54,845
All sciences, total .....	1,507,095	1,475,599	1,392,592	1,264,803	1,145,512	1,009,632	906,819	786,756
Physical sciences .....	125,111	128,261	117,894	108,380	101,224	89,146	77,714	74,386
Astronomy .....	17,947	15,340	14,980	12,045	8,619	7,857	7,845	7,872
Chemistry .....	55,030	54,269	52,722	54,377	51,998	44,346	37,448	36,185
Physics .....	44,438	41,301	38,750	35,763	35,924	32,289	28,575	26,773
Other, n.e.c. ....	7,696	17,351	11,442	6,195	4,683	4,654	3,846	3,556
Environmental sciences .....	45,173	46,076	45,634	41,140	43,245	39,423	33,512	34,066
Atmospheric .....	2,685	3,320	3,718	3,608	4,130	3,618	1,934	2,429
Earth sciences .....	18,795	19,330	17,747	13,647	15,977	14,503	13,051	12,704
Oceanography .....	7,552	8,313	8,747	8,295	8,451	8,135	7,021	8,632
Other, n.e.c. ....	16,141	15,113	15,422	15,590	14,687	13,167	11,506	10,301
Mathematical sciences .....	12,454	11,486	10,645	10,435	10,012	7,563	5,960	4,976
Computer sciences .....	48,971	52,424	52,097	48,311	49,275	42,795	40,062	32,084
Life sciences .....	1,035,963	1,017,543	967,380	867,507	768,781	694,020	631,652	537,120
Agricultural sciences .....	30,778	31,289	37,679	36,551	36,149	33,279	29,483	28,591
Biological sciences .....	302,997	305,463	286,749	263,906	242,722	212,663	192,200	152,412
Medical sciences .....	651,894	631,343	599,555	526,097	457,877	416,206	384,657	334,567
Other, n.e.c. ....	50,294	49,448	43,397	40,953	32,033	31,872	25,312	21,550
Psychology .....	30,563	31,566	25,313	22,797	20,354	18,866	15,901	13,947
Social sciences .....	137,608	138,125	118,989	118,418	110,557	88,181	79,194	64,595
Economics .....	33,047	36,762	37,351	40,145	36,992	29,771	24,033	18,463
Political science .....	42,082	44,263	32,099	28,157	29,060	21,645	19,144	14,704
Sociology .....	21,641	19,864	19,208	17,065	17,867	17,817	16,451	13,424
Other, n.e.c. ....	40,838	37,236	30,331	33,051	26,638	18,948	19,566	18,004
Other sciences, n.e.c. ....	71,252	50,118	54,640	47,815	42,064	29,638	22,824	25,582

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-15. R&D expenditures at doctorate-granting institutions, by source of funds, science and engineering field, and control: fiscal years 1986, 1992, and 1993**

[Dollars in thousands]

Page 1 of 1

Source and field	Total			Public			Private		
	1993	1992	1986	1993	1992	1986	1993	1992	1986
<b>Total</b> .....	19,539,885	18,503,999	10,784,060	13,078,749	12,314,865	7,000,278	6,461,136	6,189,134	3,783,782
<b>Source of funds:</b>									
Federal Government .....	11,727,394	10,907,991	6,620,967	6,994,233	6,456,468	3,770,300	4,733,161	4,451,523	2,850,667
State and local governments .....	1,523,317	1,462,465	900,623	1,382,517	1,325,762	818,054	140,800	136,703	82,569
Industry .....	1,343,830	1,266,715	688,569	874,856	825,006	432,784	468,974	441,709	255,785
Institutional funds .....	3,498,114	3,489,944	1,850,636	2,934,549	2,876,392	1,535,598	563,565	613,552	315,038
All other sources .....	1,447,230	1,376,884	723,265	892,594	831,237	443,542	554,636	545,647	279,723
<b>Field:</b>									
Engineering, total .....	3,089,750	3,010,849	1,623,254	2,060,692	1,992,136	992,179	1,029,058	1,018,713	631,075
Aeronautical and astronautical .....	200,395	192,186	93,345	119,192	115,440	43,760	81,203	76,746	49,585
Chemical .....	267,162	259,066	131,088	177,910	171,599	82,498	89,252	87,467	48,590
Civil .....	356,048	332,431	175,289	289,619	267,812	136,533	66,429	64,619	38,756
Electrical .....	682,918	692,240	391,062	406,197	415,982	215,298	276,721	276,258	175,764
Mechanical .....	467,215	439,751	224,545	279,147	266,316	126,069	188,068	173,435	98,476
Metallurgical and materials <sup>1</sup> .....	300,661	291,057	--	223,977	209,922	--	76,684	81,135	--
Other, n.e.c. ....	815,351	804,118	607,925	564,650	545,065	388,021	250,701	259,053	219,904
All sciences, total .....	16,450,135	15,493,150	9,160,806	11,018,057	10,322,729	6,008,099	5,432,078	5,170,421	3,152,707
Physical sciences .....	2,057,390	1,996,319	1,256,163	1,331,606	1,249,330	731,490	725,784	746,989	524,673
Astronomy .....	250,902	231,859	101,191	174,083	153,835	69,293	76,819	78,024	31,898
Chemistry .....	698,889	665,274	452,826	473,523	443,877	284,904	225,366	221,397	167,922
Physics .....	901,466	890,955	619,215	553,238	544,055	341,530	348,228	346,900	277,685
Other, n.e.c. ....	206,133	208,231	82,931	130,762	107,563	35,763	75,371	100,668	47,168
Environmental sciences .....	1,274,199	1,211,812	759,515	993,677	940,193	570,769	280,522	271,619	188,746
Atmospheric .....	207,397	191,002	118,086	174,280	159,638	99,945	33,117	31,364	18,141
Earth sciences .....	401,759	403,062	269,403	301,684	301,032	198,182	100,075	102,030	71,221
Oceanography .....	443,229	419,863	275,988	358,421	337,582	209,692	84,808	82,281	66,296
Other, n.e.c. ....	221,814	197,885	96,038	159,292	141,941	62,950	62,522	55,944	33,088
Mathematical sciences .....	258,138	238,256	147,519	147,176	138,269	79,409	110,962	99,987	68,110
Computer sciences .....	585,750	544,272	315,769	282,782	274,440	134,964	302,968	269,832	180,805
Life sciences .....	10,712,399	10,087,125	5,843,160	7,132,273	6,695,083	3,870,120	3,580,126	3,392,042	1,973,040
Agricultural sciences .....	1,514,977	1,472,616	1,070,786	1,469,923	1,429,230	1,032,700	45,054	43,386	38,086
Biological sciences .....	3,477,745	3,249,010	1,922,267	2,222,339	2,037,277	1,212,111	1,255,406	1,211,733	710,156
Medical sciences .....	5,277,556	4,954,141	2,612,760	3,174,578	2,978,013	1,471,808	2,102,978	1,976,128	1,140,952
Other, n.e.c. ....	442,121	411,358	237,347	265,433	250,563	153,501	176,688	160,795	83,846
Psychology .....	331,527	315,318	164,814	230,625	217,583	110,325	100,902	97,735	54,489
Social sciences .....	869,229	793,103	448,983	641,426	576,623	329,595	227,803	216,480	119,388
Economics .....	225,727	216,010	133,532	182,393	169,529	105,220	43,334	46,481	28,312
Political science .....	150,289	140,613	67,314	68,487	79,684	44,897	61,802	60,929	22,417
Sociology .....	176,532	157,326	91,939	130,066	112,136	58,771	46,466	45,190	33,168
Other, n.e.c. ....	316,681	279,154	156,198	240,480	215,274	120,707	76,201	63,880	35,491
Other sciences, n.e.c. ....	361,503	306,945	224,883	258,492	231,208	181,427	103,011	75,737	43,456

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-16. Federally financed R&D expenditures at doctorate-granting institutions, by science and engineering field and control: fiscal years 1986, 1992, and 1993**

[Dollars in thousands]

Page 1 of 1

Field	Total			Public			Private		
	1993	1992	1986	1993	1992	1986	1993	1992	1986
Total .....	11,727,394	10,907,991	6,620,967	6,994,233	6,456,468	3,770,300	4,733,161	4,451,523	2,850,667
Engineering, total .....	1,823,717	1,726,956	968,303	1,041,133	986,347	493,722	782,584	740,609	474,581
Aeronautical and aeronautical .....	153,414	146,700	71,692	82,989	81,466	29,471	70,425	65,234	42,221
Chemical .....	139,793	125,269	72,378	85,602	75,519	42,099	54,191	49,750	30,279
Civil .....	147,987	141,074	86,860	105,642	100,862	62,663	42,345	40,212	24,197
Electrical .....	449,334	443,089	258,594	232,683	237,146	122,074	216,651	205,943	136,520
Mechanical .....	302,341	263,233	146,060	152,411	134,834	70,175	149,930	128,399	75,885
Metallurgical and materials <sup>1</sup> .....	151,568	140,866	--	102,502	89,696	--	49,066	51,170	--
Other, n.e.c. ....	479,280	466,725	332,719	279,304	266,824	167,240	199,976	199,901	165,479
All sciences, total .....	9,903,677	9,181,035	5,652,664	5,953,100	5,470,121	3,276,578	3,950,577	3,710,914	2,376,086
Physical sciences .....	1,468,941	1,436,570	961,081	859,941	812,189	507,889	609,000	624,381	453,192
Astronomy .....	157,757	152,579	69,291	98,797	89,833	45,199	58,960	62,746	24,092
Chemistry .....	476,606	452,785	326,818	300,794	281,579	193,178	175,812	171,206	133,640
Physics .....	684,069	685,835	501,295	377,972	378,790	249,566	306,097	307,045	251,729
Other, n.e.c. ....	150,509	145,371	63,677	82,378	61,987	19,946	68,131	83,384	43,731
Environmental sciences .....	845,989	776,117	506,882	609,722	549,642	350,845	236,267	226,475	156,037
Atmospheric .....	157,013	137,562	95,643	126,576	109,516	79,904	30,437	28,046	15,739
Earth sciences .....	235,970	233,662	157,911	154,206	150,225	98,786	81,764	83,437	59,125
Oceanography .....	321,831	302,618	206,185	244,480	228,616	147,918	77,351	74,002	58,267
Other, n.e.c. ....	131,175	102,275	47,143	84,460	61,285	24,237	46,715	40,990	22,906
Mathematical sciences .....	194,323	177,372	111,508	94,557	88,098	48,133	99,766	89,274	63,375
Computer sciences .....	414,190	371,851	229,170	159,493	153,762	79,670	254,697	218,089	149,500
Life sciences .....	6,304,547	5,840,998	3,460,845	3,751,694	3,461,889	2,021,934	2,552,853	2,379,109	1,438,911
Agricultural sciences .....	419,596	388,158	278,978	405,181	376,025	269,454	14,415	12,133	9,524
Biological sciences .....	2,273,769	2,106,370	1,296,856	1,314,129	1,196,152	736,725	959,640	910,218	560,131
Medical sciences .....	3,346,239	3,108,834	1,739,955	1,894,166	1,763,716	933,112	1,452,073	1,345,118	806,843
Other, n.e.c. ....	264,943	237,636	145,056	138,218	125,996	82,643	126,725	111,640	62,413
Psychology .....	220,443	204,888	110,172	148,932	137,897	69,174	71,511	66,991	40,998
Social sciences .....	326,356	271,792	167,477	233,574	191,945	111,534	92,782	79,847	55,943
Economics .....	73,636	62,450	44,481	62,833	52,358	34,340	10,803	10,092	10,141
Political science .....	43,761	34,520	19,650	23,247	17,645	11,755	20,514	16,875	7,895
Sociology .....	87,547	78,391	47,237	61,983	52,601	27,159	25,564	25,790	20,078
Other, n.e.c. ....	121,412	96,431	56,109	85,511	69,341	38,280	35,901	27,090	17,829
Other sciences, n.e.c. ....	128,888	101,447	105,529	95,187	74,699	87,399	33,701	26,748	18,130

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-17. Non-Federal R&D expenditures at doctorate-granting institutions, by source of funds, science and engineering field, and control: fiscal years 1986, 1992, and 1993**

[Dollars in thousands]

Page 1 of 1

Source and field	Total			Public			Private		
	1993	1992	1986	1993	1992	1986	1993	1992	1986
Total .....	7,812,491	7,596,008	4,163,093	6,084,516	5,858,397	3,229,978	1,727,975	1,737,611	933,115
Source of funds:									
State and local governments .....	1,523,317	1,462,465	900,623	1,382,517	1,325,762	818,054	140,800	136,703	82,569
Industry .....	1,343,830	1,266,715	688,569	874,856	825,006	432,784	468,974	441,709	255,785
Institutional funds .....	3,498,114	3,489,944	1,850,636	2,934,549	2,876,392	1,535,598	563,565	613,552	315,038
All other sources .....	1,447,230	1,376,884	723,265	892,594	831,237	443,542	554,636	545,647	279,723
Field:									
Engineering, total .....	1,266,033	1,283,893	654,951	1,019,559	1,005,789	498,457	246,474	278,104	156,494
Aeronautical and									
astronautical .....	46,981	45,486	21,653	36,203	33,974	14,289	10,778	11,512	7,364
Chemical .....	127,369	133,797	58,710	92,308	96,080	40,399	35,061	37,717	18,311
Civil .....	208,061	191,357	88,429	183,977	166,950	73,870	24,084	24,407	14,559
Electrical .....	233,584	249,151	132,468	173,514	178,836	93,224	60,070	70,315	39,244
Mechanical .....	164,874	176,518	78,485	126,736	131,482	55,894	38,138	45,036	22,591
Metallurgical and									
materials <sup>1</sup> .....	149,093	150,191	--	121,475	120,226	--	27,618	29,965	--
Other, n.e.c. ....	336,071	337,393	275,206	285,346	278,241	220,781	50,725	59,152	54,425
All sciences, total .....	6,546,458	6,312,115	3,508,142	5,064,957	4,852,608	2,731,521	1,481,501	1,459,507	776,621
Physical sciences .....	588,449	559,749	295,082	471,665	437,141	223,601	116,784	122,608	71,481
Astronomy .....	93,145	79,280	31,900	75,286	64,002	24,094	17,859	15,279	7,806
Chemistry .....	222,283	212,489	126,008	172,729	162,298	91,726	49,554	50,191	34,282
Physics .....	217,397	205,120	117,920	175,266	165,265	91,964	42,131	39,855	25,956
Other, n.e.c. ....	55,624	62,860	19,254	48,384	45,576	15,817	7,240	17,284	3,437
Environmental sciences .....	428,210	435,695	252,633	383,955	390,551	219,924	44,255	45,144	32,709
Atmospheric .....	50,384	53,440	22,443	47,704	50,122	20,041	2,680	3,318	2,402
Earth sciences .....	165,789	169,400	111,492	147,478	150,807	99,396	18,311	18,593	12,096
Oceanography .....	121,398	117,245	69,803	113,941	108,966	61,774	7,457	8,279	8,029
Other, n.e.c. ....	90,639	95,610	48,895	74,832	80,656	38,713	15,807	14,954	10,182
Mathematical sciences .....	63,815	60,884	36,011	52,619	50,171	31,276	11,196	10,713	4,735
Computer sciences .....	171,560	172,421	86,599	123,289	120,678	55,294	48,271	51,743	31,305
Life sciences .....	4,407,852	4,246,127	2,382,315	3,380,579	3,233,194	1,848,186	1,027,273	1,012,933	534,129
Agricultural sciences .....	1,095,381	1,084,458	791,808	1,064,742	1,053,205	763,246	30,639	31,253	28,562
Biological sciences .....	1,203,976	1,142,640	625,411	908,210	841,125	475,386	295,766	301,515	150,025
Medical sciences .....	1,931,317	1,845,307	872,805	1,280,412	1,214,297	538,696	650,905	631,010	334,109
Other, n.e.c. ....	177,178	173,722	92,291	127,215	124,567	70,858	49,963	49,155	21,433
Psychology .....	111,084	110,430	54,642	81,693	79,686	41,151	29,391	30,744	13,491
Social sciences .....	542,873	521,311	281,506	407,852	384,678	218,061	135,021	136,633	63,445
Economics .....	152,091	153,560	89,051	119,560	117,171	70,880	32,531	36,389	18,171
Political science .....	106,528	106,093	47,664	65,240	62,039	33,142	41,288	44,054	14,522
Sociology .....	88,985	78,935	44,702	68,083	59,535	31,612	20,902	19,400	13,090
Other, n.e.c. ....	195,269	182,723	100,089	154,969	145,933	82,427	40,300	36,790	17,662
Other sciences, n.e.c. ....	232,615	205,498	119,354	163,305	156,509	94,028	69,310	48,989	25,326

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-18. R&D expenditures at historically black colleges and universities,  
by source of funds and science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Source and field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	191,522	178,777	150,763	142,478	130,939	93,818	74,822	72,577
Source of funds:								
Federal Government .....	157,310	146,624	122,682	116,822	106,759	75,998	61,572	60,910
State and local governments .....	8,602	9,053	6,505	6,902	6,883	4,475	2,528	1,163
Industry .....	4,796	4,145	3,230	5,353	3,966	3,292	1,637	1,797
Institutional funds .....	17,736	14,977	14,062	11,447	12,086	8,392	7,884	7,223
All other sources .....	3,078	3,978	4,284	1,954	1,245	1,661	1,201	1,484
Field:								
Engineering, total .....	21,156	20,733	16,889	13,555	10,529	7,814	6,400	6,898
Aeronautical and astronautical .....	324	423	170	119	226	410	371	263
Chemical .....	1,360	1,114	1,171	727	660	607	184	220
Civil .....	2,503	2,475	1,231	1,022	1,198	1,340	906	134
Electrical .....	4,360	4,144	4,133	2,560	2,763	1,915	2,123	1,467
Mechanical .....	6,867	7,142	4,484	3,612	3,108	2,224	1,912	1,619
Metallurgical and materials <sup>1</sup> .....	58	245	1,345	1,375	--	--	--	--
Other, n.e.c. ....	5,684	5,190	4,355	4,140	2,574	1,318	904	3,195
All sciences, total .....	170,366	158,044	133,874	128,923	120,410	86,004	68,422	65,679
Physical sciences .....	32,417	29,205	25,410	26,058	21,133	14,350	13,717	13,345
Astronomy .....	244	367	164	0	0	27	12	26
Chemistry .....	13,576	11,896	11,705	12,469	12,111	9,332	7,828	8,950
Physics .....	17,739	16,534	13,067	13,329	8,856	4,990	5,749	4,136
Other, n.e.c. ....	858	408	474	260	166	1	128	233
Environmental sciences .....	3,879	3,252	3,844	4,203	2,642	2,401	2,111	1,829
Atmospheric .....	1,333	667	542	625	388	3	0	0
Earth sciences .....	39	592	127	461	526	328	303	286
Oceanography .....	245	106	27	48	27	397	208	381
Other, n.e.c. ....	2,262	1,887	3,148	3,069	1,701	1,673	1,600	1,162
Mathematical sciences .....	5,644	4,375	2,420	1,013	728	244	311	1,444
Computer sciences .....	4,686	4,170	5,373	2,637	2,426	1,223	895	572
Life sciences .....	106,924	105,159	88,031	83,975	82,691	57,828	44,679	42,247
Agricultural sciences .....	46,286	45,225	39,154	33,608	34,112	22,148	18,538	18,999
Biological sciences .....	41,713	44,126	36,269	37,836	36,439	25,822	16,573	13,214
Medical sciences .....	16,364	12,981	10,445	11,766	11,024	8,998	8,514	9,215
Other, n.e.c. ....	2,561	2,827	2,163	765	1,116	860	1,054	819
Psychology .....	3,326	2,053	1,336	1,706	1,494	494	628	352
Social sciences .....	9,933	8,528	6,133	7,810	8,032	8,536	4,488	4,929
Economics .....	3,190	2,847	2,404	1,528	864	838	290	634
Political science .....	513	371	166	1,028	1,200	1,095	651	930
Sociology .....	2,597	2,469	2,373	2,039	1,673	2,059	649	975
Other, n.e.c. ....	3,633	2,841	1,190	3,215	4,295	4,544	2,898	2,390
Other sciences, n.e.c. ....	3,557	1,302	1,327	1,521	1,264	928	1,593	961

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-19. Federally financed R&D expenditures at historically black colleges and universities, by science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	157,310	146,624	122,682	116,822	106,759	75,998	61,572	60,910
Engineering, total .....	15,908	16,034	12,295	11,772	8,008	5,665	4,331	4,911
Aeronautical and astronautical .....	324	423	170	119	123	382	350	256
Chemical .....	1,086	852	791	438	586	554	123	158
Civil .....	1,340	1,314	278	647	880	811	585	130
Electrical .....	3,781	3,446	3,173	2,096	1,906	1,358	1,381	1,031
Mechanical .....	5,321	5,467	3,616	3,304	2,787	1,964	1,480	1,279
Metallurgical and materials <sup>1</sup> .....	58	245	1,178	1,375	--	--	--	--
Other, n.e.c. ....	3,998	4,287	3,089	3,793	1,726	596	412	2,057
All sciences, total .....	141,402	130,590	110,387	105,050	98,751	70,333	57,241	55,999
Physical sciences .....	27,508	24,491	21,494	21,742	17,706	11,940	11,756	10,956
Astronomy .....	244	367	164	0	0	27	12	26
Chemistry .....	12,281	11,043	10,359	10,740	10,292	7,633	6,347	6,989
Physics .....	14,388	12,685	10,553	10,807	7,291	4,279	5,269	3,708
Other, n.e.c. ....	595	396	418	195	123	1	128	233
Environmental sciences .....	2,856	1,972	2,028	1,447	1,408	1,641	1,392	1,278
Atmospheric .....	839	212	104	105	129	3	0	0
Earth sciences .....	32	506	96	252	248	250	239	245
Oceanography .....	212	74	1	22	2	372	206	348
Other, n.e.c. ....	1,773	1,180	1,827	1,068	1,029	1,016	947	685
Mathematical sciences .....	3,289	2,816	1,468	676	486	188	269	955
Computer sciences .....	4,138	3,533	4,581	2,092	2,037	1,088	801	525
Life sciences .....	93,417	90,538	74,910	72,208	71,316	50,360	38,740	36,896
Agricultural sciences .....	40,054	40,212	34,105	29,139	30,388	21,039	16,774	17,778
Biological sciences .....	38,204	39,395	32,831	33,463	31,651	21,825	14,865	11,914
Medical sciences .....	13,603	10,024	6,991	9,341	8,902	6,641	6,065	6,431
Other, n.e.c. ....	1,556	907	983	265	375	855	1,036	773
Psychology .....	3,050	1,597	1,263	1,240	1,108	452	589	343
Social sciences .....	5,527	4,784	4,219	4,872	3,649	3,932	2,238	4,135
Economics .....	2,833	2,570	2,137	1,296	755	548	203	522
Political science .....	107	167	90	433	566	438	364	697
Sociology .....	1,627	1,478	1,488	652	442	185	162	764
Other, n.e.c. ....	960	569	504	2,491	1,886	2,761	1,509	2,152
Other sciences, n.e.c. ....	1,617	859	424	773	1,041	732	1,456	911

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-20. Non-Federal R&D expenditures at historically black colleges and universities, by source of funds and science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Source and field	1993	1992	1991	1990	1989	1988	1987	1986
<b>Total .....</b>	<b>34,212</b>	<b>32,153</b>	<b>28,081</b>	<b>25,656</b>	<b>24,180</b>	<b>17,820</b>	<b>13,250</b>	<b>11,667</b>
<b>Source of funds:</b>								
State and local governments .....	8,602	9,053	6,505	6,902	6,883	4,475	2,528	1,163
Industry .....	4,796	4,145	3,230	5,353	3,966	3,292	1,637	1,797
Institutional funds .....	17,736	14,977	14,062	11,447	12,086	8,392	7,884	7,223
All other sources .....	3,078	3,978	4,284	1,954	1,245	1,661	1,201	1,484
<b>Field:</b>								
<b>Engineering, total .....</b>	<b>5,248</b>	<b>4,699</b>	<b>4,594</b>	<b>1,783</b>	<b>2,521</b>	<b>2,149</b>	<b>2,069</b>	<b>1,987</b>
Aeronautical and astronautical .....	0	0	0	0	103	28	21	7
Chemical .....	274	262	380	289	74	53	61	62
Civil .....	1,163	1,161	953	375	318	529	321	4
Electrical .....	579	698	960	464	857	557	742	436
Mechanical .....	1,546	1,675	868	308	321	260	432	340
Metallurgical and materials <sup>1</sup> .....	0	0	167	0	--	--	--	--
Other, n.e.c. ....	1,686	903	1,266	347	848	722	492	1,138
<b>All sciences, total .....</b>	<b>28,964</b>	<b>27,454</b>	<b>23,487</b>	<b>23,873</b>	<b>21,659</b>	<b>15,671</b>	<b>11,181</b>	<b>9,680</b>
<b>Physical sciences .....</b>	<b>4,909</b>	<b>4,714</b>	<b>3,916</b>	<b>4,316</b>	<b>3,427</b>	<b>2,410</b>	<b>1,961</b>	<b>2,389</b>
Astronomy .....	0	0	0	0	0	0	0	0
Chemistry .....	1,295	853	1,346	1,729	1,819	1,699	1,481	1,961
Physics .....	3,351	3,849	2,514	2,522	1,565	711	480	428
Other, n.e.c. ....	263	12	56	65	43	0	0	0
<b>Environmental sciences .....</b>	<b>1,023</b>	<b>1,280</b>	<b>1,816</b>	<b>2,756</b>	<b>1,234</b>	<b>760</b>	<b>719</b>	<b>551</b>
Atmospheric .....	494	455	438	520	259	0	0	0
Earth sciences .....	7	86	31	209	278	78	64	41
Oceanography .....	33	32	26	26	25	25	2	33
Other, n.e.c. ....	489	707	1,321	2,001	672	657	653	477
<b>Mathematical sciences .....</b>	<b>2,355</b>	<b>1,559</b>	<b>952</b>	<b>337</b>	<b>242</b>	<b>56</b>	<b>42</b>	<b>489</b>
<b>Computer sciences .....</b>	<b>548</b>	<b>637</b>	<b>792</b>	<b>545</b>	<b>389</b>	<b>135</b>	<b>94</b>	<b>47</b>
<b>Life sciences .....</b>	<b>13,507</b>	<b>14,621</b>	<b>13,121</b>	<b>11,767</b>	<b>11,375</b>	<b>7,468</b>	<b>5,939</b>	<b>5,351</b>
Agricultural sciences .....	6,232	5,013	5,049	4,469	3,724	1,109	1,764	1,221
Biological sciences .....	3,509	4,731	3,438	4,373	4,788	3,997	1,708	1,300
Medical sciences .....	2,761	2,957	3,454	2,425	2,122	2,357	2,449	2,784
Other, n.e.c. ....	1,005	1,920	1,180	500	741	5	18	46
<b>Psychology .....</b>	<b>276</b>	<b>456</b>	<b>73</b>	<b>466</b>	<b>386</b>	<b>42</b>	<b>39</b>	<b>9</b>
<b>Social sciences .....</b>	<b>4,406</b>	<b>3,744</b>	<b>1,914</b>	<b>2,938</b>	<b>4,383</b>	<b>4,604</b>	<b>2,250</b>	<b>794</b>
Economics .....	357	277	267	232	109	290	87	112
Political science .....	406	204	76	595	634	657	287	233
Sociology .....	970	991	885	1,387	1,231	1,874	487	211
Other, n.e.c. ....	2,673	2,272	686	724	2,409	1,783	1,389	238
<b>Other sciences, n.e.c. ....</b>	<b>1,940</b>	<b>443</b>	<b>903</b>	<b>748</b>	<b>223</b>	<b>196</b>	<b>137</b>	<b>50</b>

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

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**Table B-21. R&D expenditures at universities and colleges,  
by geographic division and source: fiscal year 1993**

[Dollars in millions]

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Division	Total	Federal	Non-Federal
Total .....	19,911	11,957	7,954
New England .....	1,738	1,183	555
Middle Atlantic .....	3,002	1,939	1,062
East North Central .....	2,824	1,594	1,231
West North Central .....	1,357	649	707
South Atlantic .....	3,696	2,280	1,416
East South Central .....	806	468	339
West South Central .....	1,940	893	1,047
Mountain .....	1,242	724	518
Pacific .....	3,245	2,192	1,052
Outlying Areas .....	61	34	27

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-22. R&D expenditures at doctorate-granting institutions, by geographic division, State, and source of funds: fiscal year 1993**

[Dollars in thousands]

Page 1 of 1

Division and State	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Total .....	19,539,885	11,727,394	1,523,317	1,343,830	3,498,114	1,447,230
New England .....	1,717,915	1,170,610	38,459	138,046	203,424	167,376
Connecticut .....	364,708	220,562	10,067	18,351	80,829	34,899
Maine .....	24,879	8,959	1,711	4,117	9,674	418
Massachusetts .....	1,075,820	770,317	15,357	102,951	69,419	117,776
New Hampshire .....	99,475	67,727	5,846	4,842	11,768	9,292
Rhode Island .....	103,194	71,515	2,812	3,212	23,481	2,174
Vermont .....	49,839	31,530	2,666	4,573	8,253	2,817
Middle Atlantic .....	2,938,827	1,898,103	132,259	232,260	445,069	231,136
New Jersey .....	374,134	166,490	36,501	26,150	116,341	28,652
New York .....	1,545,890	1,054,808	75,581	87,879	179,467	148,155
Pennsylvania .....	1,018,803	676,805	20,177	118,231	149,261	54,329
East North Central .....	2,785,835	1,571,783	220,134	181,463	548,065	264,390
Illinois .....	748,036	423,715	45,693	44,745	169,754	64,129
Indiana .....	302,811	167,743	20,552	22,535	65,991	25,990
Michigan .....	699,957	377,278	39,541	47,390	172,114	63,634
Ohio .....	590,839	347,852	45,938	48,095	86,481	62,473
Wisconsin .....	444,192	255,195	68,410	18,698	53,725	48,164
West North Central .....	1,341,149	642,434	194,294	90,000	330,605	83,816
Iowa .....	298,745	145,006	38,218	17,907	80,919	16,695
Kansas .....	154,103	59,635	36,640	7,527	44,215	6,086
Minnesota .....	332,033	174,716	49,861	21,524	64,840	21,092
Missouri .....	344,566	190,959	18,959	31,492	78,490	24,666
Nebraska .....	135,737	38,023	39,576	8,891	36,406	12,841
North Dakota .....	54,175	25,223	1,532	2,173	23,595	1,652
South Dakota .....	21,790	8,872	9,508	486	2,140	784
South Atlantic .....	3,621,465	2,224,472	307,353	280,640	642,808	166,192
Delaware .....	52,627	26,170	3,710	4,857	13,937	3,953
District of Columbia .....	145,218	100,345	1,038	10,313	18,346	15,176
Florida .....	488,551	267,717	31,641	40,565	119,937	28,691
Georgia .....	546,960	273,079	39,325	51,968	167,509	15,079
Maryland .....	1,147,121	847,466	93,252	47,719	125,118	33,566
North Carolina .....	604,581	377,983	74,041	69,950	63,862	18,745
South Carolina .....	178,174	73,020	16,057	14,242	52,850	22,005
Virginia .....	403,212	227,030	46,285	37,053	67,117	25,727
West Virginia .....	55,021	31,662	2,004	3,973	14,132	3,250
East South Central .....	787,043	451,921	86,280	62,871	134,498	51,473
Alabama .....	281,209	161,331	26,991	23,729	48,358	20,800
Kentucky .....	122,409	55,698	6,198	13,575	41,030	5,908
Mississippi .....	105,739	54,715	21,836	9,824	10,960	8,404
Tennessee .....	277,686	180,177	31,255	15,743	34,150	16,361
West South Central .....	1,889,238	860,513	268,325	123,149	436,186	201,065
Arkansas .....	74,011	25,362	23,666	6,767	14,774	3,442
Louisiana .....	255,171	95,891	64,306	16,508	61,267	17,199
Oklahoma .....	172,968	56,475	22,399	10,320	67,338	16,436
Texas .....	1,387,088	682,785	157,954	89,554	292,807	163,988
Mountain .....	1,233,199	717,796	81,483	88,619	273,062	72,239
Arizona .....	310,721	149,803	6,333	18,889	112,596	23,100
Colorado .....	331,081	222,107	18,026	23,651	41,797	25,500
Idaho .....	48,774	17,026	12,550	7,286	11,068	844
Montana .....	48,080	21,399	9,029	3,234	14,011	407
Nevada .....	79,124	43,196	4,361	5,245	25,193	1,129
New Mexico .....	186,750	113,060	13,998	18,743	28,507	12,442
Utah .....	196,113	136,630	13,075	9,303	29,253	7,852
Wyoming .....	32,556	14,575	4,111	2,268	10,637	965
Pacific .....	3,174,414	2,159,976	186,020	146,277	474,888	207,253
Alaska .....	66,796	41,616	3,012	4,751	17,412	5
California .....	2,380,144	1,629,545	112,454	99,291	367,857	170,997
Hawaii .....	73,961	41,362	27,099	151	3,109	2,240
Oregon .....	225,750	134,956	29,762	8,578	34,209	18,245
Washington .....	427,763	312,497	13,693	33,506	52,301	15,766
Outlying Areas .....	50,800	29,786	8,710	505	9,509	2,290

SOURCE: National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-23. R&D expenditures at doctorate-granting institutions,  
by geographic division and State: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Division and State	1993	1992	1991	1990	1989	1988	1987	1986
<b>Total</b> .....	<b>19,539,885</b>	<b>18,503,999</b>	<b>17,326,237</b>	<b>16,054,837</b>	<b>14,768,079</b>	<b>13,295,420</b>	<b>12,002,092</b>	<b>10,784,060</b>
<b>New England</b> .....	<b>1,717,915</b>	<b>1,604,053</b>	<b>1,510,919</b>	<b>1,422,595</b>	<b>1,356,621</b>	<b>1,234,706</b>	<b>1,115,314</b>	<b>1,039,272</b>
Connecticut .....	364,708	339,674	320,935	302,659	284,410	254,958	230,790	212,815
Maine .....	24,879	23,213	27,082	23,605	19,974	17,341	16,952	19,315
Massachusetts .....	1,075,820	1,007,705	948,938	898,804	867,521	790,391	719,581	673,378
New Hampshire .....	99,475	87,412	78,975	69,731	62,172	57,658	50,928	44,330
Rhode Island .....	103,194	96,507	88,448	82,634	79,801	77,543	65,516	59,735
Vermont .....	49,839	49,542	46,541	45,162	42,743	36,815	31,547	29,699
<b>Middle Atlantic</b> .....	<b>2,938,827</b>	<b>2,825,793</b>	<b>2,648,493</b>	<b>2,524,102</b>	<b>2,354,870</b>	<b>2,145,023</b>	<b>1,936,397</b>	<b>1,750,431</b>
New Jersey .....	374,134	376,540	349,902	326,028	281,890	243,271	214,696	180,841
New York .....	1,545,890	1,481,296	1,419,765	1,368,400	1,311,643	1,226,382	1,109,627	1,022,312
Pennsylvania .....	1,018,803	967,957	878,826	829,674	761,337	675,370	612,074	547,278
<b>East North Central</b> .....	<b>2,785,835</b>	<b>2,633,254</b>	<b>2,452,608</b>	<b>2,235,583</b>	<b>2,081,176</b>	<b>1,897,912</b>	<b>1,709,642</b>	<b>1,509,270</b>
Illinois .....	748,036	726,917	697,565	646,927	602,558	546,300	498,221	438,991
Indiana .....	302,811	282,982	262,508	240,696	227,266	211,813	188,086	176,374
Michigan .....	699,957	650,400	601,189	527,407	487,192	438,420	396,580	341,905
Ohio .....	590,839	553,847	503,725	457,189	427,345	381,895	329,344	287,603
Wisconsin .....	444,192	419,108	387,621	363,364	336,815	319,484	297,411	264,397
<b>West North Central</b> .....	<b>1,341,149</b>	<b>1,248,019</b>	<b>1,209,462</b>	<b>1,072,851</b>	<b>964,779</b>	<b>869,292</b>	<b>801,223</b>	<b>738,470</b>
Iowa .....	298,745	268,721	259,437	232,472	209,394	181,481	157,539	146,312
Kansas .....	154,103	139,012	124,174	114,651	107,856	99,655	93,931	90,579
Minnesota .....	332,033	317,026	331,471	292,046	258,614	236,115	222,381	201,743
Missouri .....	344,566	321,255	305,780	285,003	255,009	232,148	205,597	185,935
Nebraska .....	135,737	131,038	123,711	104,371	93,506	83,122	74,468	71,088
North Dakota .....	54,175	52,731	48,930	29,966	27,951	24,444	35,912	31,840
South Dakota .....	21,790	18,236	15,959	14,342	12,449	12,327	11,395	10,973
<b>South Atlantic</b> .....	<b>3,621,465</b>	<b>3,375,462</b>	<b>3,197,688</b>	<b>2,961,161</b>	<b>2,729,665</b>	<b>2,328,705</b>	<b>2,095,181</b>	<b>1,818,813</b>
Delaware .....	52,627	48,970	44,696	40,119	37,194	32,023	31,681	28,798
District of Columbia .....	145,218	133,524	118,398	112,146	111,325	94,851	85,470	73,170
Florida .....	488,551	428,372	438,054	433,413	385,556	298,933	278,847	236,478
Georgia .....	546,960	514,809	484,019	452,907	424,424	372,720	331,000	291,036
Maryland .....	1,147,121	1,112,586	1,066,228	963,446	913,748	795,718	723,915	606,632
North Carolina .....	604,581	551,349	501,841	441,860	419,848	366,995	313,819	281,929
South Carolina .....	178,174	163,839	151,204	137,269	120,137	102,160	95,811	86,603
Virginia .....	403,212	368,756	342,476	331,973	278,065	234,887	207,934	189,876
West Virginia .....	55,021	53,257	50,772	48,028	39,368	30,418	26,704	24,291
<b>East South Central</b> .....	<b>787,043</b>	<b>728,947</b>	<b>695,133</b>	<b>651,712</b>	<b>586,227</b>	<b>536,200</b>	<b>453,231</b>	<b>403,250</b>
Alabama .....	281,209	258,537	252,998	246,566	215,836	186,949	157,459	137,396
Kentucky .....	122,409	109,644	97,989	90,880	83,998	91,948	78,008	68,552
Mississippi .....	105,739	98,555	100,383	88,991	78,922	67,050	59,882	61,299
Tennessee .....	277,686	262,211	243,763	225,275	207,471	190,253	157,882	136,003
<b>West South Central</b> .....	<b>1,889,238</b>	<b>1,751,210</b>	<b>1,658,979</b>	<b>1,510,855</b>	<b>1,351,292</b>	<b>1,209,496</b>	<b>1,093,296</b>	<b>981,154</b>
Arkansas .....	74,011	60,657	55,081	48,861	43,676	37,955	35,529	35,379
Louisiana .....	255,171	243,614	235,726	207,509	180,032	165,623	148,563	134,200
Oklahoma .....	172,968	169,427	152,624	130,650	113,279	113,931	99,363	89,020
Texas .....	1,387,088	1,277,512	1,215,548	1,123,835	1,014,305	891,987	809,841	722,555
<b>Mountain</b> .....	<b>1,233,199</b>	<b>1,192,476</b>	<b>1,085,661</b>	<b>998,476</b>	<b>885,912</b>	<b>803,902</b>	<b>725,759</b>	<b>666,287</b>
Arizona .....	310,721	299,733	284,128	261,384	223,834	199,178	181,263	160,678
Colorado .....	331,081	304,943	260,587	249,958	226,555	206,287	185,699	175,760
Idaho .....	48,774	46,896	41,437	36,570	33,191	30,789	24,779	23,729
Montana .....	48,080	44,596	38,149	34,980	32,450	32,069	29,425	26,438
Nevada .....	79,124	71,425	66,742	53,750	45,555	40,034	34,254	29,535
New Mexico .....	186,750	181,971	170,139	151,927	136,189	129,087	132,145	118,569
Utah .....	196,113	212,731	201,470	187,076	164,828	146,029	120,878	112,915
Wyoming .....	32,556	30,181	23,009	22,831	23,310	20,429	17,316	18,663
<b>Pacific</b> .....	<b>3,174,414</b>	<b>3,093,633</b>	<b>2,820,884</b>	<b>2,633,431</b>	<b>2,415,596</b>	<b>2,231,189</b>	<b>2,034,734</b>	<b>1,842,036</b>
Alaska .....	66,796	67,881	67,432	65,571	56,701	49,856	47,432	45,008
California .....	2,380,144	2,342,985	2,146,235	2,007,550	1,850,062	1,726,582	1,558,609	1,382,399
Hawaii .....	73,961	80,258	78,166	76,525	70,733	64,278	57,345	57,383
Oregon .....	225,750	203,915	179,384	171,616	161,215	148,419	135,421	124,282
Washington .....	427,763	398,594	349,667	312,169	276,885	242,054	235,927	232,964
<b>Outlying Areas</b> .....	<b>50,800</b>	<b>51,152</b>	<b>46,410</b>	<b>44,071</b>	<b>41,941</b>	<b>38,995</b>	<b>37,315</b>	<b>35,077</b>

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-24. Federally financed R&D expenditures at doctorate-granting institutions,  
by geographic division and State: fiscal years 1986-93**

[Dollars in thousands]

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Division and State	1993	1992	1991	1990	1989	1988	1987	1986
<b>Total</b> .....	11,727,394	10,907,991	10,072,332	9,489,429	8,856,963	8,088,351	7,250,487	6,620,967
<b>New England</b> .....	1,170,610	1,095,518	1,030,570	981,113	944,086	884,476	808,738	754,047
Connecticut .....	220,562	205,900	197,120	190,388	187,212	173,912	155,717	145,583
Maine .....	8,959	8,975	10,062	9,046	8,288	7,048	7,787	8,584
Massachusetts .....	770,317	724,121	680,079	649,104	621,789	580,783	536,999	504,837
New Hampshire .....	67,727	60,382	52,833	44,590	41,816	39,077	34,633	29,929
Rhode Island .....	71,515	63,383	59,616	57,430	56,446	58,117	51,313	45,266
Vermont .....	31,530	32,757	30,860	30,555	28,535	25,539	22,289	19,848
<b>Middle Atlantic</b> .....	1,898,103	1,764,933	1,617,946	1,551,847	1,440,367	1,354,115	1,239,652	1,127,720
New Jersey .....	166,490	162,818	147,644	133,959	117,237	105,738	95,294	82,681
New York .....	1,054,808	986,525	918,063	902,794	854,137	820,962	758,446	703,202
Pennsylvania .....	676,805	615,590	552,239	515,094	468,993	427,415	385,912	341,837
<b>East North Central</b> .....	1,571,783	1,445,419	1,317,195	1,233,380	1,178,005	1,095,494	976,921	889,277
Illinois .....	423,715	394,505	361,461	352,786	338,082	315,809	293,929	258,845
Indiana .....	167,743	153,981	143,761	134,953	136,040	130,777	111,413	106,979
Michigan .....	377,278	339,328	309,592	276,078	263,506	242,766	207,729	188,863
Ohio .....	347,852	319,868	284,791	260,537	242,559	217,622	193,615	177,598
Wisconsin .....	255,195	237,737	217,590	209,026	197,818	188,520	170,235	156,992
<b>West North Central</b> .....	642,434	604,697	566,841	514,812	482,532	431,767	390,239	354,914
Iowa .....	145,006	133,612	123,858	113,268	103,360	87,855	76,915	69,932
Kansas .....	59,635	53,150	43,913	43,478	44,292	42,402	37,386	35,552
Minnesota .....	174,716	165,926	164,887	143,810	132,880	119,789	109,003	100,308
Missouri .....	190,959	180,743	165,099	152,398	139,677	124,552	113,146	102,592
Nebraska .....	38,023	38,600	40,597	34,169	36,761	35,041	33,275	28,679
North Dakota .....	25,223	24,572	21,570	20,815	19,396	16,285	15,385	12,729
South Dakota .....	8,872	8,094	6,917	6,874	6,166	5,843	5,129	5,122
<b>South Atlantic</b> .....	2,224,472	2,052,287	1,918,610	1,793,139	1,687,732	1,448,374	1,292,844	1,154,933
Delaware .....	26,170	21,629	20,053	17,588	17,083	13,708	13,662	12,578
District of Columbia .....	100,345	94,107	86,793	86,292	84,274	70,850	62,968	53,933
Florida .....	267,717	230,439	220,683	223,232	200,742	151,012	129,474	124,032
Georgia .....	273,079	256,701	238,664	218,498	210,248	180,475	151,367	137,242
Maryland .....	847,466	829,940	790,174	729,675	707,811	617,993	576,698	497,348
North Carolina .....	377,983	332,927	303,921	276,795	261,896	229,191	195,177	177,301
South Carolina .....	73,020	59,688	54,045	45,718	41,627	39,759	34,350	31,963
Virginia .....	227,030	198,493	183,798	172,435	146,712	129,450	116,137	107,005
West Virginia .....	31,662	28,363	20,479	22,906	17,339	15,936	13,011	13,531
<b>East South Central</b> .....	451,921	411,744	373,576	352,424	316,030	280,575	231,795	200,770
Alabama .....	161,331	142,520	132,063	130,208	119,693	109,380	89,738	73,823
Kentucky .....	55,698	47,095	38,386	38,249	32,963	33,162	30,778	24,963
Mississippi .....	54,715	54,512	52,853	43,724	35,747	28,158	24,532	23,740
Tennessee .....	180,177	167,617	150,274	140,243	127,627	109,875	86,747	78,244
<b>West South Central</b> .....	860,513	768,317	712,402	659,861	604,636	561,514	495,789	452,919
Arkansas .....	25,362	22,063	20,178	17,485	14,213	14,039	12,257	12,385
Louisiana .....	95,891	89,089	98,860	83,213	69,219	60,963	54,367	47,497
Oklahoma .....	56,475	46,486	42,806	37,020	33,067	31,391	25,880	24,290
Texas .....	682,785	610,679	550,558	522,143	488,137	455,121	403,285	368,747
<b>Mountain</b> .....	717,796	689,245	631,853	587,650	522,768	477,080	421,787	401,339
Arizona .....	149,803	143,240	131,627	122,259	105,367	94,630	80,955	76,615
Colorado .....	222,107	208,315	187,819	179,978	167,043	152,091	136,003	125,715
Idaho .....	17,026	17,343	15,681	14,361	12,585	11,196	8,988	9,328
Montana .....	21,399	18,467	13,801	12,520	11,552	13,635	11,299	9,082
Nevada .....	43,196	35,599	38,221	33,959	26,587	22,751	18,563	16,574
New Mexico .....	113,060	110,587	94,309	85,747	76,777	73,835	75,923	76,334
Utah .....	136,630	142,396	137,613	126,619	109,053	97,806	81,355	78,370
Wyoming .....	14,575	13,298	12,782	12,207	13,804	11,136	8,701	9,321
<b>Pacific</b> .....	2,159,976	2,046,728	1,877,964	1,790,790	1,656,689	1,532,614	1,373,692	1,266,936
Alaska .....	41,616	32,066	34,335	31,896	26,659	23,441	21,523	19,607
California .....	1,629,545	1,546,727	1,436,542	1,378,526	1,285,165	1,198,865	1,069,307	976,559
Hawaii .....	41,362	47,684	44,857	42,665	40,574	38,560	34,472	35,322
Oregon .....	134,956	124,198	108,849	107,466	99,141	90,126	81,932	73,360
Washington .....	312,497	296,053	253,381	230,237	205,150	181,622	166,458	162,088
<b>Outlying Areas</b> .....	29,786	29,103	25,375	24,413	24,118	22,342	19,030	18,112

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-25. State and local government-financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1986-93**

[Dollars in thousands]

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Division and State	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	1,523,317	1,462,465	1,449,486	1,299,635	1,202,637	1,089,990	1,006,841	900,623
New England .....	38,459	34,857	33,795	31,743	32,965	32,948	27,186	26,436
Connecticut .....	10,067	5,937	5,996	5,262	5,430	4,013	2,495	4,361
Maine .....	1,711	1,320	2,197	908	584	543	315	796
Massachusetts .....	15,357	14,461	13,090	14,080	18,529	20,672	18,390	14,419
New Hampshire .....	5,846	5,175	4,375	3,985	2,646	2,536	2,045	3,384
Rhode Island .....	2,812	5,434	5,278	5,119	3,276	2,886	2,136	1,547
Vermont .....	2,666	2,530	2,859	2,389	2,500	2,298	1,805	1,929
Middle Atlantic .....	132,259	135,246	145,383	152,006	146,090	123,891	114,575	94,743
New Jersey .....	36,501	41,882	43,361	46,278	45,150	36,815	37,489	28,093
New York .....	75,581	71,024	75,490	74,439	68,474	61,273	53,496	47,204
Pennsylvania .....	20,177	22,340	26,532	31,289	32,466	25,803	23,590	19,446
East North Central .....	220,134	229,174	232,924	199,653	192,219	181,083	161,540	139,210
Illinois .....	45,693	52,643	52,573	38,023	33,881	29,329	30,610	29,068
Indiana .....	20,552	20,271	20,347	19,449	18,911	16,813	15,772	17,478
Michigan .....	39,541	39,907	42,539	36,747	35,983	33,471	30,320	25,976
Ohio .....	45,938	50,236	53,079	46,349	48,072	47,437	35,038	20,650
Wisconsin .....	68,410	66,117	64,386	59,085	55,372	54,033	49,800	46,038
West North Central .....	194,294	174,054	179,472	155,629	134,798	117,197	120,367	110,032
Iowa .....	38,218	31,006	34,147	29,500	24,839	20,495	16,653	13,655
Kansas .....	36,640	30,467	28,967	25,523	24,159	21,092	20,031	19,721
Minnesota .....	49,861	49,720	53,614	47,437	42,542	39,297	37,287	31,819
Missouri .....	18,959	17,703	19,061	18,469	14,509	13,050	11,753	11,397
Nebraska .....	39,576	37,523	35,817	27,860	22,926	17,468	16,123	15,988
North Dakota .....	1,532	1,085	1,327	1,061	918	713	13,731	13,254
South Dakota .....	9,508	6,550	6,539	5,779	4,905	5,082	4,789	4,198
South Atlantic .....	307,353	297,188	308,287	289,755	262,378	235,919	212,643	182,030
Delaware .....	3,710	4,702	4,024	3,139	2,603	2,456	1,995	1,645
District of Columbia .....	1,038	1,428	463	465	480	264	484	289
Florida .....	31,641	31,775	36,736	33,305	25,655	19,498	13,889	9,994
Georgia .....	39,325	39,835	43,222	42,638	40,141	40,161	39,621	33,372
Maryland .....	93,252	82,288	81,956	72,022	64,063	56,630	50,425	38,724
North Carolina .....	74,041	69,901	71,990	64,923	61,259	58,048	54,897	48,926
South Carolina .....	16,057	15,480	16,858	17,384	17,421	15,594	14,061	14,598
Virginia .....	46,285	49,472	51,474	54,680	49,501	42,198	36,400	33,695
West Virginia .....	2,004	2,307	1,564	1,199	1,255	1,070	871	787
East South Central .....	86,280	80,426	87,202	83,683	77,310	82,729	72,278	77,585
Alabama .....	26,991	26,313	27,267	25,752	18,339	21,263	16,627	22,568
Kentucky .....	6,198	5,086	6,122	6,684	7,113	13,169	10,841	11,588
Mississippi .....	21,836	19,731	20,886	20,953	20,493	19,396	16,775	21,445
Tennessee .....	31,255	29,296	32,927	30,294	31,365	28,901	28,035	21,984
West South Central .....	268,325	245,199	228,737	193,867	181,811	152,372	136,685	131,001
Arkansas .....	23,666	15,441	13,958	11,826	12,186	9,701	9,352	9,390
Louisiana .....	64,306	64,885	62,167	43,700	40,758	38,556	31,850	32,218
Oklahoma .....	22,399	19,578	13,593	7,665	5,062	4,670	3,463	2,663
Texas .....	157,954	145,295	139,019	130,676	123,805	99,445	92,020	86,730
Mountain .....	81,483	76,216	75,017	72,077	70,675	65,804	67,797	59,572
Arizona .....	6,333	7,299	7,945	7,318	7,949	5,486	8,965	8,024
Colorado .....	18,026	15,471	12,905	11,637	10,679	9,334	8,771	6,762
Idaho .....	12,550	10,681	8,604	8,156	8,112	10,507	8,314	6,187
Montana .....	9,029	10,285	8,884	7,885	7,919	6,649	7,325	7,719
Nevada .....	4,361	3,109	2,608	3,200	2,682	3,463	1,973	1,516
New Mexico .....	13,998	13,845	15,467	14,776	14,612	13,912	17,908	17,331
Utah .....	13,075	12,874	16,756	17,049	17,183	15,290	13,412	10,869
Wyoming .....	4,111	2,652	1,848	2,056	1,539	1,163	1,129	1,164
Pacific .....	186,020	181,965	150,501	113,842	97,329	89,558	83,212	69,753
Alaska .....	3,012	3,680	1,926	2,205	2,101	1,847	2,999	3,182
California .....	112,454	111,255	84,176	52,108	43,546	41,516	36,690	23,870
Hawaii .....	27,099	26,775	27,321	27,487	24,759	21,469	19,317	18,771
Oregon .....	29,762	27,244	25,727	22,568	20,860	19,399	18,645	18,423
Washington .....	13,693	13,011	11,351	9,474	6,063	5,327	5,561	5,507
Outlying Areas .....	8,710	8,140	8,168	7,380	7,062	8,489	10,558	10,261

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-26. Industry-financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Division and State	1993	1992	1991	1990	1989	1988	1987	1986
<b>Total</b> .....	<b>1,343,830</b>	<b>1,266,715</b>	<b>1,185,402</b>	<b>1,110,474</b>	<b>978,635</b>	<b>858,512</b>	<b>777,062</b>	<b>688,569</b>
<b>New England</b> .....	<b>138,046</b>	<b>125,380</b>	<b>123,117</b>	<b>115,753</b>	<b>107,101</b>	<b>96,433</b>	<b>86,493</b>	<b>74,813</b>
Connecticut .....	18,351	15,273	16,121	13,402	11,630	9,974	9,298	5,892
Maine .....	4,117	3,545	4,719	4,663	4,002	2,823	2,051	2,856
Massachusetts .....	102,951	94,639	90,390	86,122	78,727	69,455	64,806	56,556
New Hampshire .....	4,842	4,451	3,997	3,715	2,951	2,397	2,081	1,578
Rhode Island .....	3,212	3,135	3,709	4,378	6,305	8,645	5,380	4,600
Vermont .....	4,573	4,337	4,181	3,473	3,486	3,139	2,877	3,331
<b>Middle Atlantic</b> .....	<b>232,260</b>	<b>229,236</b>	<b>204,986</b>	<b>194,761</b>	<b>178,752</b>	<b>155,957</b>	<b>140,825</b>	<b>129,279</b>
New Jersey .....	26,150	25,972	19,494	17,318	16,421	14,227	11,780	9,617
New York .....	87,879	91,816	85,282	78,359	70,598	63,485	62,756	58,059
Pennsylvania .....	118,231	111,448	100,210	99,084	91,733	78,245	66,289	61,603
<b>East North Central</b> .....	<b>181,463</b>	<b>169,055</b>	<b>169,656</b>	<b>162,037</b>	<b>147,578</b>	<b>112,578</b>	<b>99,851</b>	<b>85,009</b>
Illinois .....	44,745	43,574	49,583	44,812	38,990	29,173	23,791	19,692
Indiana .....	22,535	21,165	19,726	18,165	18,419	16,244	17,203	14,967
Michigan .....	47,390	44,903	43,684	44,694	36,310	26,063	25,146	21,174
Ohio .....	48,095	40,665	37,948	37,385	37,591	26,940	22,265	18,916
Wisconsin .....	18,698	18,748	18,715	16,981	16,268	14,158	11,446	10,260
<b>West North Central</b> .....	<b>90,000</b>	<b>85,539</b>	<b>81,592</b>	<b>78,235</b>	<b>69,373</b>	<b>61,163</b>	<b>52,740</b>	<b>47,236</b>
Iowa .....	17,907	21,563	14,372	12,354	14,711	9,488	6,212	4,749
Kansas .....	7,527	8,302	7,292	7,613	5,187	5,648	5,433	3,798
Minnesota .....	21,524	17,529	19,270	18,086	12,389	10,670	11,056	11,157
Missouri .....	31,492	27,152	30,195	28,082	25,151	23,494	19,325	18,691
Nebraska .....	8,891	8,529	7,845	8,875	9,098	8,585	6,664	5,336
North Dakota .....	2,173	2,056	2,308	2,845	2,521	2,742	3,578	3,072
South Dakota .....	486	408	310	380	316	536	472	433
<b>South Atlantic</b> .....	<b>280,640</b>	<b>257,011</b>	<b>241,677</b>	<b>213,514</b>	<b>179,092</b>	<b>157,281</b>	<b>134,972</b>	<b>118,794</b>
Delaware .....	4,857	5,075	4,732	4,397	4,073	3,558	3,659	3,551
District of Columbia .....	10,313	8,113	7,279	8,017	7,924	6,504	4,192	3,558
Florida .....	40,565	35,077	35,690	28,440	20,660	18,019	20,334	20,472
Georgia .....	51,968	42,067	40,010	37,343	35,635	34,521	34,196	30,596
Maryland .....	47,719	44,211	39,915	42,640	35,603	28,909	25,803	18,757
North Carolina .....	69,950	63,625	55,079	43,372	41,375	36,628	23,825	21,564
South Carolina .....	14,242	19,061	15,903	12,931	7,906	8,693	6,184	5,908
Virginia .....	37,053	34,187	31,899	26,292	21,953	19,672	15,895	13,484
West Virginia .....	3,973	5,595	11,170	10,082	3,963	777	884	904
<b>East South Central</b> .....	<b>62,871</b>	<b>57,070</b>	<b>52,168</b>	<b>45,847</b>	<b>39,564</b>	<b>38,224</b>	<b>33,670</b>	<b>31,425</b>
Alabama .....	23,729	21,620	20,348	18,662	16,242	12,703	10,916	10,923
Kentucky .....	13,575	12,800	10,569	8,123	7,516	4,591	6,715	8,173
Mississippi .....	9,824	9,141	8,892	8,314	5,439	5,050	4,282	3,084
Tennessee .....	15,743	13,509	12,359	10,748	10,367	15,880	11,757	9,245
<b>West South Central</b> .....	<b>123,149</b>	<b>117,231</b>	<b>108,715</b>	<b>96,387</b>	<b>81,558</b>	<b>75,186</b>	<b>63,964</b>	<b>55,261</b>
Arkansas .....	6,767	5,381	4,514	4,064	4,123	3,865	2,829	3,068
Louisiana .....	16,508	17,757	15,678	10,168	8,193	8,088	7,154	6,253
Oklahoma .....	10,320	10,170	8,559	6,872	5,667	7,855	7,078	7,083
Texas .....	89,554	83,923	79,964	75,283	63,575	55,378	46,903	38,857
<b>Mountain</b> .....	<b>88,619</b>	<b>91,969</b>	<b>79,189</b>	<b>78,150</b>	<b>62,089</b>	<b>59,438</b>	<b>63,336</b>	<b>53,966</b>
Arizona .....	18,889	19,130	19,519	18,066	12,500	15,196	17,456	14,411
Colorado .....	23,651	21,637	16,481	15,992	14,381	11,044	8,728	8,766
Idaho .....	7,286	5,147	5,050	4,206	4,199	3,654	2,899	2,787
Montana .....	3,234	3,230	4,406	4,266	3,242	3,129	3,197	2,717
Nevada .....	5,245	5,992	5,323	4,733	4,296	3,563	3,983	3,402
New Mexico .....	18,743	22,460	19,530	21,509	16,433	15,837	20,123	14,770
Utah .....	9,303	11,532	6,880	7,377	5,503	5,215	5,734	5,334
Wyoming .....	2,268	2,841	2,000	2,001	1,535	1,800	1,216	1,779
<b>Pacific</b> .....	<b>146,277</b>	<b>133,208</b>	<b>123,625</b>	<b>125,474</b>	<b>113,306</b>	<b>102,065</b>	<b>101,211</b>	<b>92,731</b>
Alaska .....	4,751	3,275	1,547	4,100	3,039	2,672	3,024	2,936
California .....	99,291	93,959	86,265	88,708	83,218	74,459	72,676	63,544
Hawaii .....	151	337	856	1,585	799	378	261	508
Oregon .....	8,578	6,736	6,850	6,343	4,857	4,641	4,067	6,989
Washington .....	33,506	28,901	28,107	24,738	21,393	19,915	21,183	18,754
<b>Outlying Areas</b> .....	<b>505</b>	<b>1,016</b>	<b>677</b>	<b>316</b>	<b>222</b>	<b>187</b>	<b>0</b>	<b>55</b>

SOURCE: National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-27. Institutionally financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1986-93**

[Dollars in thousands]

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Division and State	1993	1992	1991	1990	1989	1988	1987	1986
<b>Total</b> .....	3,498,114	3,489,944	3,328,760	2,977,536	2,672,287	2,334,348	2,149,751	1,850,636
<b>New England</b> .....	203,424	196,701	183,770	162,105	148,711	111,972	100,028	96,768
Connecticut .....	80,829	79,429	73,778	68,927	56,999	43,689	39,761	41,445
Maine .....	9,674	8,892	9,504	8,253	6,567	6,214	5,740	5,075
Massachusetts .....	69,419	67,169	66,348	53,644	58,681	40,865	37,790	35,644
New Hampshire .....	11,768	11,421	10,225	11,500	9,333	9,556	8,114	6,027
Rhode Island .....	23,481	22,345	17,520	13,237	11,646	7,294	5,293	5,202
Vermont .....	8,253	7,445	6,395	6,544	5,485	4,354	3,330	3,375
<b>Middle Atlantic</b> .....	445,069	460,677	446,646	407,055	363,266	309,617	267,517	234,505
New Jersey .....	116,341	119,163	114,157	103,882	82,798	68,835	55,142	47,636
New York .....	179,467	183,267	190,624	177,199	170,970	149,334	126,941	108,727
Pennsylvania .....	149,261	158,247	141,865	125,974	109,498	91,448	85,434	78,142
<b>East North Central</b> .....	548,065	537,691	517,977	451,668	415,859	374,596	348,489	290,305
Illinois .....	169,754	171,466	177,424	161,984	150,694	134,015	117,826	100,387
Indiana .....	65,991	64,601	61,425	52,059	43,658	39,938	37,627	31,130
Michigan .....	172,114	163,068	152,841	128,581	116,135	104,181	103,830	81,556
Ohio .....	86,481	83,800	73,765	61,520	62,068	54,761	47,189	43,712
Wisconsin .....	53,725	54,756	52,522	47,524	43,304	41,701	42,017	33,520
<b>West North Central</b> .....	330,605	308,328	301,243	252,727	220,024	201,626	184,248	175,779
Iowa .....	80,919	71,144	74,471	67,626	60,863	55,980	49,668	47,613
Kansas .....	44,215	42,537	39,897	33,491	30,204	27,567	27,607	27,639
Minnesota .....	64,840	61,532	60,904	53,399	43,713	37,261	39,371	37,251
Missouri .....	78,490	69,361	67,335	63,364	59,615	57,777	49,579	41,496
Nebraska .....	36,406	38,051	34,780	29,856	20,676	18,697	14,893	18,734
North Dakota .....	23,595	23,417	22,336	4,019	4,113	3,705	2,391	2,305
South Dakota .....	2,140	2,286	1,520	972	840	639	739	741
<b>South Atlantic</b> .....	642,808	614,398	585,533	535,562	491,589	405,162	378,951	301,304
Delaware .....	13,937	14,522	12,724	11,751	11,125	9,894	10,117	9,349
District of Columbia .....	18,346	15,871	12,718	10,539	13,022	11,614	11,642	10,761
Florida .....	119,937	108,535	116,339	122,097	112,906	93,228	98,188	68,861
Georgia .....	167,509	161,049	149,645	143,645	126,231	108,098	95,827	81,851
Maryland .....	125,118	123,249	122,290	89,568	81,790	73,156	59,733	42,215
North Carolina .....	63,862	65,197	51,758	40,761	41,222	31,865	25,757	22,151
South Carolina .....	52,850	51,932	54,011	50,859	44,864	33,793	37,110	30,488
Virginia .....	67,117	61,868	52,857	54,213	45,348	32,301	29,841	27,855
West Virginia .....	14,132	12,175	13,191	12,129	15,081	11,213	10,736	7,773
<b>East South Central</b> .....	134,498	135,311	137,579	126,130	113,590	103,260	89,485	75,408
Alabama .....	48,358	48,532	52,667	52,253	45,106	34,048	29,919	22,205
Kentucky .....	41,030	39,870	38,008	33,258	30,593	35,099	26,545	22,277
Mississippi .....	10,960	9,485	12,132	9,488	9,670	8,737	8,897	10,949
Tennessee .....	34,150	37,424	34,772	31,131	28,221	25,376	24,124	19,977
<b>West South Central</b> .....	436,186	418,473	415,244	391,329	326,841	282,434	276,815	245,521
Arkansas .....	14,774	14,321	12,945	12,451	9,521	7,286	8,028	7,875
Louisiana .....	61,267	51,397	44,184	55,010	47,129	45,611	42,639	38,096
Oklahoma .....	67,338	76,907	74,265	70,398	60,063	62,105	57,472	51,149
Texas .....	292,807	275,848	283,850	253,470	210,128	167,432	168,676	148,401
<b>Mountain</b> .....	273,062	271,936	242,979	205,554	183,797	158,178	136,712	121,587
Arizona .....	112,596	110,306	109,028	98,210	86,076	71,898	61,644	53,798
Colorado .....	41,797	36,675	23,078	22,465	17,735	17,916	17,682	21,968
Idaho .....	11,068	13,232	11,697	9,596	8,148	5,432	4,436	5,331
Montana .....	14,011	11,545	10,820	10,147	9,534	8,442	7,604	6,920
Nevada .....	25,193	25,553	19,675	10,172	10,396	8,995	8,805	6,862
New Mexico .....	28,507	25,388	28,762	19,399	17,860	16,183	14,187	6,711
Utah .....	29,253	38,330	33,779	29,237	27,822	23,208	16,178	13,750
Wyoming .....	10,637	10,907	6,140	6,328	6,226	6,104	6,176	6,247
<b>Pacific</b> .....	474,888	535,529	487,541	435,398	400,013	379,638	359,879	302,950
Alaska .....	17,412	27,205	28,246	23,636	21,869	19,229	17,960	17,318
California .....	367,857	427,406	389,156	351,692	321,615	312,158	289,628	241,323
Hawaii .....	3,109	3,319	3,391	3,568	3,686	2,975	2,591	2,064
Oregon .....	34,209	30,184	21,519	19,074	16,717	17,325	16,077	10,070
Washington .....	52,301	47,415	45,229	37,428	36,126	27,951	33,623	32,175
<b>Outlying Areas</b> .....	9,509	10,900	10,248	10,008	8,597	7,865	7,627	6,509

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-28. All other sources of financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1986-93**

[Dollars in thousands]

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Division and State	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	1,447,230	1,376,884	1,290,257	1,177,763	1,057,557	924,219	817,951	723,265
New England .....	167,376	151,597	139,667	131,881	123,758	108,877	92,869	87,208
Connecticut .....	34,899	33,135	27,920	24,680	23,139	23,370	23,519	15,534
Maine .....	418	481	600	735	533	713	1,059	2,004
Massachusetts .....	117,776	107,315	99,031	95,854	89,795	78,616	61,596	61,922
New Hampshire .....	9,292	5,983	7,545	5,941	5,426	4,092	4,055	3,412
Rhode Island .....	2,174	2,210	2,325	2,470	2,128	601	1,394	3,120
Vermont .....	2,817	2,473	2,246	2,201	2,737	1,485	1,246	1,216
Middle Atlantic .....	231,136	235,701	233,532	218,433	226,395	201,443	173,828	164,184
New Jersey .....	28,652	26,705	25,246	24,591	20,284	17,656	14,991	12,814
New York .....	148,155	148,664	150,306	135,609	147,464	131,328	107,988	105,120
Pennsylvania .....	54,329	60,332	57,980	58,233	58,647	52,459	50,849	46,250
East North Central .....	264,390	251,915	214,856	188,845	147,515	134,161	122,841	105,469
Illinois .....	64,129	64,729	56,524	49,322	40,911	37,974	32,065	30,999
Indiana .....	25,990	22,964	17,249	16,070	10,238	8,041	6,071	5,820
Michigan .....	63,634	63,194	52,533	41,307	35,258	31,939	29,555	24,336
Ohio .....	62,473	59,278	54,142	51,398	37,055	35,135	31,237	26,727
Wisconsin .....	48,164	41,750	34,408	30,748	24,053	21,072	23,913	17,587
West North Central .....	83,816	75,401	80,314	71,448	58,052	57,539	53,629	50,509
Iowa .....	16,695	11,396	12,589	9,724	5,621	7,663	8,091	10,363
Kansas .....	6,086	4,556	4,105	4,546	4,014	2,946	3,474	3,869
Minnesota .....	21,092	22,319	32,796	29,314	27,090	29,098	25,664	21,208
Missouri .....	24,666	26,296	24,090	22,690	16,057	13,275	11,794	11,759
Nebraska .....	12,841	8,335	4,672	3,611	4,045	3,331	3,513	2,351
North Dakota .....	1,652	1,601	1,389	1,226	1,003	999	827	480
South Dakota .....	784	898	673	337	222	227	266	479
South Atlantic .....	166,192	154,578	143,581	129,191	108,874	81,969	75,771	61,752
Delaware .....	3,953	3,042	3,163	3,244	2,310	2,407	2,248	1,675
District of Columbia .....	15,176	14,005	11,145	6,833	5,625	5,619	6,184	4,629
Florida .....	28,691	22,546	28,606	26,339	25,593	17,176	16,962	13,119
Georgia .....	15,079	15,157	12,478	10,783	12,169	9,465	9,989	7,975
Maryland .....	33,566	32,898	31,893	29,541	24,481	19,030	11,256	9,588
North Carolina .....	18,745	19,699	19,093	16,009	14,096	11,263	14,163	11,987
South Carolina .....	22,005	17,678	10,387	10,377	8,319	4,321	4,106	3,646
Virginia .....	25,727	24,736	22,448	24,353	14,551	11,266	9,661	7,837
West Virginia .....	3,250	4,817	4,368	1,712	1,730	1,422	1,202	1,296
East South Central .....	51,473	44,396	44,608	43,628	39,733	31,412	26,003	18,062
Alabama .....	20,800	19,552	20,653	19,691	16,456	9,555	10,259	7,877
Kentucky .....	5,908	4,793	4,904	4,566	5,813	5,927	3,129	1,551
Mississippi .....	8,404	5,686	5,620	6,512	7,573	5,709	5,396	2,081
Tennessee .....	16,361	14,365	13,431	12,859	9,891	10,221	7,219	6,553
West South Central .....	201,065	201,990	193,881	169,411	156,446	137,990	120,043	96,452
Arkansas .....	3,442	3,451	3,486	3,035	3,633	3,064	3,063	2,661
Louisiana .....	17,199	20,486	14,837	15,418	14,733	12,405	12,553	10,136
Oklahoma .....	16,436	16,286	13,401	8,695	9,420	7,910	5,470	3,835
Texas .....	163,988	161,767	162,157	142,263	128,660	114,611	98,957	79,820
Mountain .....	72,239	63,110	56,623	55,045	46,583	43,402	36,127	29,823
Arizona .....	23,100	19,758	16,009	15,531	11,942	11,968	12,243	7,830
Colorado .....	25,500	22,845	20,304	19,886	16,717	15,902	14,515	12,549
Idaho .....	844	493	405	251	147	0	142	96
Montana .....	407	1,069	238	162	203	214	0	0
Nevada .....	1,129	1,172	915	1,686	1,594	1,262	930	1,181
New Mexico .....	12,442	9,691	12,071	10,496	10,507	9,320	4,004	3,423
Utah .....	7,852	7,599	6,442	6,794	5,267	4,510	4,199	4,592
Wyoming .....	965	483	239	239	206	226	94	152
Pacific .....	207,253	196,203	181,253	167,927	148,259	127,314	116,740	109,666
Alaska .....	5	1,655	1,378	3,734	3,033	2,667	1,926	1,965
California .....	170,997	163,638	150,096	136,516	116,518	99,584	90,308	77,103
Hawaii .....	2,240	2,143	1,741	1,220	915	896	704	718
Oregon .....	18,245	15,553	16,439	16,165	19,640	16,928	14,700	15,440
Washington .....	15,766	13,214	11,599	10,292	8,153	7,239	9,102	14,440
Outlying Areas .....	2,290	1,993	1,942	1,954	1,942	112	100	140

SOURCE: National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1993**

[Dollars in thousands]

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State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
United States, total .....	19,539,885	11,727,394	1,523,317	1,343,830	3,498,114	1,447,230
Public, total .....	13,078,749	6,994,233	1,382,517	874,856	2,934,549	892,594
Private, total .....	6,461,136	4,733,161	140,800	468,974	563,565	554,636
Alabama, total .....	281,209	161,331	26,991	23,729	48,358	20,800
Public, total .....	281,209	161,331	26,991	23,729	48,358	20,800
Alabama A&M University .....	9,316	7,295	0	0	2,021	0
Auburn University .....	68,151	17,438	22,571	6,059	16,736	5,347
The University of Alabama ..	23,149	8,583	165	2,419	11,982	0
U of Alabama Birmingham ..	133,790	94,762	2,539	10,832	10,204	15,453
U of Alabama Huntsville .....	34,153	24,983	1,257	2,857	5,056	0
U of South Alabama .....	12,650	8,270	459	1,562	2,359	0
Alaska, total .....	66,796	41,616	3,012	4,751	17,412	5
Public, total .....	66,796	41,616	3,012	4,751	17,412	5
U of Alaska Fairbanks .....	66,796	41,616	3,012	4,751	17,412	5
Arizona, total .....	310,721	149,803	6,333	18,889	112,596	23,100
Public, total .....	310,721	149,803	6,333	18,889	112,596	23,100
Arizona State University .....	66,142	30,032	997	4,772	28,620	1,721
Northern Arizona U .....	9,051	6,348	173	648	1,882	0
University of Arizona .....	235,528	113,423	5,163	13,469	82,094	21,379
Arkansas, total .....	74,011	25,362	23,666	6,767	14,774	3,442
Public, total .....	74,011	25,362	23,666	6,767	14,774	3,442
U Arkansas Fayetteville .....	58,325	14,398	23,184	4,964	13,735	2,044
U Arkansas Med Sci .....	15,686	10,964	482	1,803	1,039	1,398
California, total .....	2,380,144	1,629,545	112,454	99,291	367,857	170,997
Public, total .....	1,735,381	1,107,893	99,877	63,348	314,238	150,025
CA St U Long Beach .....	4,507e	3,830e	87e	486e	40e	64e
San Diego St University .....	32,493	16,862	7,181	1,418	4,992	2,040
U CA Berkeley .....	284,346	156,394	28,597	12,269	67,838	19,248
U CA Davis .....	223,758	105,255	16,240	6,852	78,581	16,830
U CA Irvine .....	100,631	64,546	5,595	4,898	14,029	11,563
U CA Los Angeles .....	277,974	189,065	5,514	13,606	35,305	34,484
U CA Riverside .....	59,065	19,126	3,641	1,208	31,601	3,489
U CA San Diego .....	307,051	243,149	10,057	10,081	21,768	21,996
U CA San Francisco .....	314,599	210,148	19,200	9,244	43,910	32,097
U CA Santa Barbara .....	68,775	54,057	1,663	2,487	6,455	4,113
U CA Santa Cruz .....	37,886	21,821	1,961	458	9,719	3,927
U CA System .....	0	0	0	0	0	0
US Naval Postgrad School ..	24,296	23,640	141	341	0	174
Private, total .....	644,763	521,652	12,577	35,943	53,619	20,972
Biola University .....	0	0	0	0	0	0
C R Drew U of Med & Sci .....	6,852	6,483	0	369	0	0
CA Inst of Integral Stu .....	0	0	0	0	0	0
CA Sch Prof Psy Alameda ..	0	0	0	0	0	0
CA Sch Prof Psy Fresno .....	616	74	4	98	440	0
CA Sch Prof Psy L.A. ....	427	0	0	0	320	107
CA Sch Prof Psy S Diego .....	66	0	0	0	66	0
California Inst of Tech .....	115,439	103,888	762	3,835	4,411	2,543
Claremont Graduate Sch .....	1,011	53	211	42	222	483
Col Osteo Med of Pacific .....	39	0	0	0	39	0
Fielding Institute .....	0	0	0	0	0	0
Fuller Theological Sem .....	110	80	20	0	10	0
Golden Gate University .....	0	0	0	0	0	0
Loma Linda University .....	9,030	4,963	0	2,228	1,424	415
Pacific Grad Sch of Psy .....	0	0	0	0	0	0

See explanatory information and SOURCE at end of table.



**Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1993**

[Dollars in thousands]

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State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
California, continued:						
Private, continued:						
Pepperdine University .....	0	0	0	0	0	0
RAND Grad Sch Pol Stu .....	0	0	0	0	0	0
Santa Clara University .....	1,815	422	0	452	887	54
Stanford University .....	306,676	254,379	1,188	15,337	18,703	17,069
The Wright Institute .....	0	0	0	0	0	0
U of Southern California .....	200,822	149,965	10,392	13,444	27,021	0
US International U .....	0	0	0	0	0	0
University of San Diego .....	736	302	0	138	76	220
University of the Pacific .....	1,124	1,043	0	0	0	81
Colorado, total .....	331,081	222,107	18,026	23,651	41,797	25,500
Public, total .....	322,486	214,552	17,668	23,367	41,399	25,500
Colorado School of Mines .....	13,644	7,050	692	5,770	132	0
Colorado State University .....	115,385	68,733	14,291	5,369	25,138	1,854
U of Northern Colorado .....	240	185	17	10	28	0
University of Colorado .....	193,217	138,584	2,668	12,218	16,101	23,646
Private, total .....	8,595	7,555	358	284	398	0
University of Denver .....	8,595	7,555	358	284	398	0
Connecticut, total .....	364,708	220,562	10,067	18,351	80,829	34,899
Public, total .....	133,054	49,051	7,988	8,357	58,275	9,383
University of Connecticut .....	133,054	49,051	7,988	8,357	58,275	9,383
Private, total .....	231,654	171,511	2,079	9,994	22,554	25,516
University of Hartford .....	0e	0e	0e	0e	0e	0e
Wesleyan University .....	4,804	2,611	381	0	1,366	446
Yale University .....	226,850	168,900	1,698	9,994	21,188	25,070
Delaware, total .....	52,627	26,170	3,710	4,857	13,937	3,953
Public, total .....	52,627	26,170	3,710	4,857	13,937	3,953
University of Delaware .....	52,627	26,170	3,710	4,857	13,937	3,953
District of Columbia, total .....	145,218	100,345	1,038	10,313	18,346	15,176
Private, total .....	145,218	100,345	1,038	10,313	18,346	15,176
American University .....	3,903	3,569	13	107	191	23
Catholic U of America .....	7,926	5,796	0	1,690	440	0
George Washington U .....	41,177	27,698	427	2,168	3,702	7,182
Georgetown University .....	73,785	48,463	58	5,914	12,595	6,755
Howard University .....	18,427	14,819	540	434	1,418	1,216
Florida, total .....	488,551	267,717	31,641	40,565	119,937	28,691
Public, total .....	360,690	173,537	28,322	27,706	115,043	16,082
Florida A&M University .....	22,777	18,954	2,320	1,503	0	0
Florida Atlantic U .....	11,331	5,655	3,172	2,504	0	0
Florida International U .....	11,443	9,289	1,013	366	514	261
Florida State University .....	62,929	38,690	2,325	1,377	18,491	2,046
U of Central Florida .....	33,922	12,527	3,204	5,810	12,381	0
U of South Florida .....	75,322	16,718	6,033	5,041	41,121	6,409
University of Florida .....	142,966	71,704	10,255	11,105	42,536	7,366
Private, total .....	127,861	94,180	3,319	12,859	4,894	12,609
Florida Inst of Tech .....	5,866	1,903	1,388	1,884	349	342
Nova University .....	1,120	805	159	147	9	0
University of Miami .....	120,875	91,472	1,772	10,828	4,536	12,267

See explanatory information and SOURCE at end of table.

**Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1993**

[Dollars in thousands]

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State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Georgia, total .....	546,960	273,079	39,325	51,968	167,509	15,079
Public, total .....	385,215	164,022	36,797	40,942	139,915	3,539
Georgia Institute of Tech .....	175,873	98,398	1,985	28,872	46,618	0
Georgia State University .....	12,133	5,826	289	490	4,944	584
Medical Col of Georgia .....	24,935	7,713	404	2,777	12,394	1,647
University of Georgia .....	172,274	52,085	34,119	8,803	75,959	1,308
Private, total .....	161,745	109,057	2,528	11,026	27,594	11,540
Clark Atlanta University .....	12,057	10,484	114	190	1,269	0
Emory University .....	120,125	80,424	2,394	8,145	18,464	10,698
Inst Paper Sci and Tech .....	8,344	1,311	0	1,726	4,473	834
Mercer University .....	13,771	10,241	20	399	3,111	0
Morehouse School of Med ..	7,448	6,597	0	566	277	8
Hawaii, total .....	73,961	41,362	27,099	151	3,109	2,240
Public, total .....	73,961	41,362	27,099	151	3,109	2,240
University Hawaii Manoa .....	73,961	41,362	27,099	151	3,109	2,240
Idaho, total .....	48,774	17,026	12,550	7,286	11,068	844
Public, total .....	48,774	17,026	12,550	7,286	11,068	844
Idaho State University .....	4,119	1,149	260	1,678	566	466
University of Idaho .....	44,655	15,877	12,290	5,608	10,502	378
Illinois, total .....	748,036	423,715	45,693	44,745	169,754	64,129
Public, total .....	400,489	206,503	41,974	24,015	101,717	26,280
Illinois State University .....	4,535	1,839	1,633	0	36	1,027
Northern Illinois U .....	11,215	5,663	137	1,317	4,098	0
Sthm IL U Carbondale .....	26,376	7,437	6,071	2,033	9,062	1,773
University of IL Chicago .....	105,552	50,415	4,686	4,570	32,161	13,520
University of IL Urbana .....	252,811	141,149	29,247	16,095	56,360	9,960
Private, total .....	347,547	217,212	3,719	20,730	68,037	37,849
Chicago Sch of Prof Psy .....	0	0	0	0	0	0
DePaul University .....	1,510	893	0	0	226	391
Finch U Hlth Sci Chicago .....	6,928	5,033	0	94	831	970
Illinois Inst of Tech .....	8,252	6,349	509	1,031	363	0
Loyola U of Chicago .....	29,232	18,230	537	3,614	2,844	4,007
Midwestern University .....	1,482	303	0	213	843	123
Northwestern University .....	154,227	77,687	1,358	8,784	49,200	17,198
Rush University .....	34,039	12,787	1,150	5,036	8,817	6,249
University of Chicago .....	111,877	95,930	165	1,958	4,913	8,911
Indiana, total .....	302,811	167,743	20,552	22,535	65,991	25,990
Public, total .....	279,066	151,328	19,405	18,511	63,832	25,990
Ball State University .....	1,322	606	28	254	434	0
Indiana State University .....	835	391	108	233	0	103
Indiana University .....	127,877	77,377	1,731	4,850	27,391	16,528
Purdue University .....	149,032	72,954	17,538	13,174	36,007	9,359
Private, total .....	23,745	16,415	1,147	4,024	2,159	0
University of Notre Dame .....	23,745	16,415	1,147	4,024	2,159	0
Iowa, total .....	298,745	145,006	38,218	17,907	80,919	16,695
Public, total .....	298,349	144,663	38,218	17,880	80,899	16,689
Iowa St U of Sci & Tech .....	148,459	50,695	35,035	7,402	48,977	6,350
U of Iowa .....	148,811	93,483	3,036	10,478	31,562	10,252
U of Northern Iowa .....	1,079	485	147	0	360	87

See explanatory information and SOURCE at end of table.

**Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1993**

[Dollars in thousands]

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State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Iowa, continued:						
Private, total .....	396	343	0	27	20	6
Maharishi International U ....	0e	0e	0e	0e	0e	0e
U Osteo Med & Hlth Sci .....	396	343	0	27	20	6
Kansas, total .....	154,103	59,635	36,640	7,527	44,215	6,086
Public, total .....	154,103	59,635	36,640	7,527	44,215	6,086
KS St U Agri & App Sci .....	62,562	19,582	27,845	2,889	10,708	1,538
University of Kansas .....	85,134	37,738	6,164	4,037	33,368	3,827
Wichita State University .....	6,407	2,315	2,631	601	139	721
Kentucky, total .....	122,409	55,698	6,198	13,575	41,030	5,908
Public, total .....	122,407	55,698	6,198	13,575	41,028	5,908
University of Kentucky .....	102,911	46,774	6,099	9,924	35,189	4,925
University of Louisville .....	19,496	8,924	99	3,651	5,839	983
Private, total .....	2	0	0	0	2	0
Spalding University .....	2	0	0	0	2	0
Louisiana, total .....	255,171	95,891	64,306	16,508	61,267	17,199
Public, total .....	176,368	55,806	62,142	9,866	37,686	10,868
Louisiana State U System ...	158,823	52,598	56,400	9,203	30,993	9,629
Louisiana Tech University ...	3,582	687	1,827	609	459	0
Northeast Louisiana U .....	2,644	1,391	1,253	0	0	0
U of Southwestern LA .....	11,319	1,130	2,662	54	6,234	1,239
Private, total .....	78,803	40,085	2,164	6,642	23,581	6,331
Tulane University .....	75,634	36,940	2,164	6,618	23,581	6,331
Xavier University of LA .....	3,169	3,145	0	24	0	0
Maine, total .....	24,879	8,959	1,711	4,117	9,674	418
Public, total .....	24,879	8,959	1,711	4,117	9,674	418
U of Maine Orono .....	24,879	8,959	1,711	4,117	9,674	418
Maryland, total .....	1,147,121	847,466	93,252	47,719	125,118	33,566
Public, total .....	401,606	173,865	92,047	35,155	93,174	7,365
U MD Baltimore County .....	7,544	4,845	1,350	1,349	0	0
U MD Baltimore Prof Sch ....	111,772	53,556	22,766	14,420	15,035	5,995
U MD Center for EES .....	19,055	5,413	3,015	115	9,142	1,370
U MD College Park .....	229,344	85,041	64,562	19,271	60,470	0
U MD Eastern Shore .....	3,045	2,691	354	0	0	0
Unif Svcs U of Hlth Sci .....	30,846	22,319	0	0	8,527	0
Private, total .....	745,515	673,601	1,205	12,564	31,944	26,201
Johns Hopkins U .....	745,515	673,601	1,205	12,564	31,944	26,201
Massachusetts, total .....	1,075,820	770,317	15,357	102,951	69,419	117,776
Public, total .....	142,425	72,642	9,837	12,703	37,255	9,988
U MA Amherst .....	64,111	32,065	4,889	5,288	15,482	6,387
U MA Boston .....	9,745	2,133	2,425	3	3,200	1,984
U MA Lowell .....	14,292	5,959	2,370	3,691	655	1,617
U MA Worcester .....	54,277	32,485	153	3,721	17,918	0
Private, total .....	933,395	697,675	5,520	90,248	32,164	107,788
Boston College .....	10,731	8,151	75	286	1,060	1,159
Boston University .....	91,158	71,593	994	9,982	0	8,589

See explanatory information and SOURCE at end of table.

**Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1993**

[Dollars in thousands]

Page 5 of 11

State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Massachusetts, continued:						
Private, continued:						
Brandeis University .....	36,213	21,825	120	0	4,520	9,748
Clark University .....	2,311	1,717	0	0	9	585
Harvard University .....	257,207	181,969	358e	9,319e	14,610e	50,951
MA Col Phar Allied Hlth .....	181	0	0	181	0	0
MA Institute of Tech .....	365,553	267,414	3,058	58,106	8,139	28,836
Northeastern University .....	18,517	15,339	325	1,445	144	1,264
Smith College .....	1,545i	332i	0i	0i	398i	815i
Tufts University .....	56,976	46,625	11	9,328e	985e	27e
Woods Hole Ocngrphc Inst .....	81,519	73,546	429	644	1,245	5,655
Worcester Polytech Inst .....	11,484	9,164	150	957	1,054	159
Michigan, total .....	699,957	377,278	39,541	47,390	172,114	63,634
Public, total .....	697,511	376,426	39,491	46,137	171,868	63,589
Central Michigan U .....	1,733	628	376	276	453	0
Michigan State University .....	150,861	70,294	25,601	6,442	35,159	13,365
Michigan Tech University .....	18,696	9,777	852	3,127	4,940	0
Oakland University .....	6,096	3,026	574	827	1,389	280
University of Michigan .....	425,868	249,951	4,891	26,733	104,163	40,130
Wayne State University .....	85,627	40,367	6,208	7,738	23,126	8,188
Western Michigan U .....	8,630	2,383	989	994	2,638	1,626
Private, total .....	2,446	852	50	1,253	246	45
Andrews University .....	377	82	50	1	199	45
U of Detroit Mercy .....	2,069	770	0	1,252	47	0
Minnesota, total .....	332,033	174,716	49,861	21,524	64,840	21,092
Public, total .....	332,033	174,716	49,861	21,524	64,840	21,092
University of Minnesota .....	332,033	174,716	49,861	21,524	64,840	21,092
Private, total .....	0	0	0	0	0	0
Mayo Grad Sch of Med .....	0	0	0	0	0	0
Mississippi, total .....	105,739	54,715	21,836	9,824	10,960	8,404
Public, total .....	105,739	54,715	21,836	9,824	10,960	8,404
Jackson State University .....	4,371	3,831	0	540	0	0
Mississippi State U .....	70,300	29,616	19,435	6,012	8,195	7,042
U Southern Mississippi .....	7,334	6,351	180	545	258	0
University of Mississippi .....	23,734	14,917	2,221	2,727	2,507	1,362
Missouri, total .....	344,566	190,959	18,959	31,492	78,490	24,666
Public, total .....	140,790	42,525	15,178	11,005	61,733	10,349
U of Missouri Columbia .....	106,193	29,612	13,810	7,907	48,148	6,716
U of Missouri Kansas City .....	10,976	4,967	617	964	3,538	890
U of Missouri Rolla .....	18,025	6,128	690	1,717	7,049	2,441
U of Missouri St Louis .....	4,681	1,818	61	353	2,147	302
U of Missouri System Off .....	915	0	0	64	851	0
Private, total .....	203,776	148,434	3,781	20,487	16,757	14,317
Forest Inst of Prof Psy .....	2,717	0	0	0	2,717	0
Kirkville Col Osteo Med .....	829	369	0	0	192	268
St Louis University .....	20,826	18,583	182	1,054	255	752
U of Health Sci (MO) .....	75	0	0	45	30	0
Washington University .....	179,329	129,482	3,599	19,388	13,563	13,297

See explanatory information and SOURCE at end of table.

**Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1993**

[Dollars in thousands]

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State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Montana, total .....	48,080	21,399	9,029	3,234	14,011	407
Public, total .....	48,080	21,399	9,029	3,234	14,011	407
Montana State University .....	32,911	14,096	7,938	2,910	7,967	0
University of Montana .....	15,169	7,303	1,091	324	6,044	407
Nebraska, total .....	135,737	38,023	39,576	8,891	36,406	12,841
Public, total .....	126,628	34,061	39,508	5,775	34,523	12,761
U of NE Med Ctr Omaha .....	31,669	10,131	4,632	3,488	11,528	1,890
U of Nebraska Lincoln .....	94,959	23,930	34,876	2,287	22,995	10,871
Private, total .....	9,109	3,962	68	3,116	1,883	80
Creighton University .....	9,109	3,962	68	3,116	1,883	80
Nevada, total .....	79,124	43,196	4,361	5,245	25,193	1,129
Public, total .....	79,124	43,196	4,361	5,245	25,193	1,129
Desert Research Institute .....	21,187	15,514	1,887	3,293	493	0
U of Nevada Las Vegas .....	19,373	10,585	1,450	919	5,959	460
U of Nevada Reno .....	38,564	17,097	1,024	1,033	18,741	669
New Hampshire, total .....	99,475	67,727	5,846	4,842	11,768	9,292
Public, total .....	39,555	23,635	1,390	1,467	8,910	4,153
U of New Hampshire .....	39,555	23,635	1,390	1,467	8,910	4,153
Private, total .....	59,920	44,092	4,456	3,375	2,858	5,139
Dartmouth College .....	59,920	44,092	4,456	3,375	2,858	5,139
New Jersey, total .....	374,134	166,490	36,501	26,150	116,341	28,652
Public, total .....	261,216	98,968	34,730	18,624	91,253	17,641
NJ Inst of Technology .....	23,781	8,275	5,314	3,459	5,878	855
Rutgers the State U NJ .....	161,025	55,169	24,221	7,734	64,358	9,543
U Med & Dent NJ .....	76,410	35,524	5,195	7,431	21,017	7,243
Private, total .....	112,918	67,522	1,771	7,526	25,088	11,011
Fairleigh Dickinson U .....	140	53	2	1	20	64
Princeton University .....	98,603	56,746	847	5,866	24,197	10,947
Seton Hall University .....	171	171	0	0	0	0
Stevens Institute Tech .....	14,004	10,552	922	1,659	871	0
New Mexico, total .....	186,750	113,060	13,998	18,743	28,507	12,442
Public, total .....	186,750	113,060	13,998	18,743	28,507	12,442
NM Inst Mining & Tech .....	24,040	5,373	2,262	9,803	6,373	229
New Mexico State U .....	85,974	64,821	9,079	3,466	7,751	857
University of New Mexico .....	76,736	42,866	2,657	5,474	14,383	11,356
New York, total .....	1,545,890	1,054,808	75,581	87,879	179,467	148,155
Public, total .....	354,157	214,590	10,553	19,667	74,704	34,643
CUNY Grad Sch & U Ctr .....	3,125	2,386	0	0	28	711
CUNY H H Lehman Col .....	0e	0e	0e	0e	0e	0e
SUNY Albany .....	37,860	27,318	130	1,240	4,859	4,313
SUNY Binghamton .....	13,760	5,005	1,766	1,312	3,492	2,185
SUNY Buffalo .....	128,203	80,723	6,333	5,584	19,150	16,413
SUNY Col Env Sci & Frstry .....	21,856	3,177	762	2,010	15,201	706
SUNY Col of Optometry .....	377	164	0	50	107	56
SUNY Hlth Sci Ctr Brklyn .....	27,645	17,916	324	4,421	3,293	1,691
SUNY Hlth Sci Ctr Syracuse .....	13,514	9,878	70	380	0	3,186
SUNY Stony Brook .....	107,817	68,023	1,168	4,670	28,574	5,382

See explanatory information and SOURCE at end of table.

**Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1993**

[Dollars in thousands]

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State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
New York, continued:						
Private, total .....	1,191,733	840,218	65,028	68,212	104,763	113,512
Adelphi University .....	370i	95i	0i	0i	0i	275i
Albany Medical College .....	11,845	8,564	0	38	2,993	250
Alfred University .....	4,479	797	1,050	1,897	664	71
CUNY Mt Sinal Sch of Med ..	75,337	49,800	1,280	5,549	8,249	10,459
Clarkson University .....	10,586	5,795	877	1,455	2,459	0
Columbia U Main Division ...	204,710	182,696	1,548	5,919	3,683	10,864
Columbia U Teachers Col ...	79	0	0	0	0	79
Cornell University .....	310,949	195,229	41,770	15,789	32,619	25,542
Fordham University .....	1,737	1,006	193	0	0	538
Hofstra University .....	1,073	1,073	0	0	0	0
Long Island University .....	278	109	44	19	67	39
New Sch for Socl Res .....	1,559	376	0	0	0	1,183
New York Inst Technology ..	402	141	0	0	229	32
New York Medical College ..	18,491	13,468	362	1,480	0	3,181
New York University .....	129,774	93,633	1,405	4,917	10,475	19,344
Pace University All Crmp .....	0e	0e	0e	0e	0e	0e
Polytechnic University .....	9,424	6,394	1,271	1,420e	273	66e
Rensselaer Polytech Inst .....	44,132	22,106	4,396	10,813	2,310	4,507
Rochester Inst of Tech .....	6,331	1,561	163	1,504	3,103	0
Rockefeller University .....	74,396	36,854	28	4,907	16,181	16,426
St John's University (NY) ....	860	590	0	270	0	0
Syracuse University .....	32,443	16,818	3,786	2,166	6,551	3,122
Union College (NY) .....	1,032	444	8	421	159	0
University of Rochester .....	161,810	130,898	6,847	7,868	3,723	12,474
Yeshiva University .....	89,636	71,771	0	1,780	11,025	5,060
North Carolina, total .....	604,581	377,983	74,041	69,950	63,862	18,745
Public, total .....	344,501	199,745	70,048	27,045	46,399	1,264
East Carolina University .....	7,360	4,392	859	2,109	0	0
NC State U Raleigh .....	155,624	62,470	50,597	22,229	19,220	1,108
U of NC Chapel Hill .....	179,157	130,920	18,551	2,539	27,147	0
U of NC Greensboro .....	2,360	1,963	41	168	32	156
Private, total .....	260,080	178,238	3,993	42,905	17,463	17,481
Duke University .....	202,434	136,377	3,684	34,572	13,786	14,015
Wake Forest University .....	57,646	41,861	309	8,333	3,677	3,466
North Dakota, total .....	54,175	25,223	1,532	2,173	23,595	1,652
Public, total .....	54,175	25,223	1,532	2,173	23,595	1,652
North Dakota State U .....	34,971	8,756	1,399	1,191	22,219	1,406
University North Dakota .....	19,204	16,467	133	982	1,376	246
Ohio, total .....	590,839	347,852	45,938	48,095	86,481	62,473
Public, total .....	420,965	217,536	42,030	36,802	75,070	49,527
Air Force Inst of Tech .....	3,252	3,252	0	0	0	0
Bowling Green State U .....	3,430	1,686	129	126	1,489	0
Cleveland State U .....	9,803	5,187	1,644	593	2,379	0
Kent State University .....	12,075	6,363	1,389	155	3,458	710
Med Col of Ohio Toledo .....	12,285	8,286	610	920	1,842	627
Miami University (OH) .....	4,919	2,343	13	759	1,804	0
Nrtheastm OH U Col Med ...	1,362	652	4	38	307	361
Ohio State University .....	221,460	109,069	29,836	13,647	30,823	38,085
Ohio University .....	15,452	5,168	2,616	2,201	4,757	710
University of Akron .....	15,385	4,328	1,848	5,247	3,705	257
University of Cincinnati .....	92,512	57,394	1,756	10,621	17,069	5,672
University of Toledo .....	8,441	3,727	352	1,956	1,609	797
Wright State University .....	20,589	10,081	1,833	539	5,828	2,308

See explanatory information and SOURCE at end of table.

**Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1993**

[Dollars in thousands]

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State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Ohio, continued:						
Private, total .....	169,874	130,316	3,908	11,293	11,411	12,946
Antioch University .....	131	116	0	0	0	15
Case Western Reserve U .....	124,691	91,867	3,648	6,480	9,833	12,863
Union Institute .....	0	0	0	0	0	0
University of Dayton .....	45,052	38,333	260	4,813	1,578	68
Oklahoma, total .....	172,968	56,475	22,399	10,320	67,338	16,436
Public, total .....	164,939	54,138	21,054	7,449	65,876	16,422
Oklahoma State University ..	72,920	20,840	10,232	3,531	35,992	2,325
University of Oklahoma .....	92,019	33,298	10,822	3,918	29,884	14,097
Private, total .....	8,029	2,337	1,345	2,871	1,462	14
Oral Roberts University .....	140	0	0	110	20	10
University of Tulsa .....	7,889	2,337	1,345	2,761	1,442	4
Oregon, total .....	225,750	134,956	29,762	8,578	34,209	18,245
Public, total .....	207,462	125,365	29,049	5,940	32,064	15,044
Oregon Health Sciences U ..	56,860	38,913	50	992	13,446	3,459
Oregon State University .....	114,004	61,118	27,820	4,291	12,110	8,665
Portland State University .....	5,860	3,869	507	112	935	437
University of Oregon .....	30,738	21,465	672	545	5,573	2,483
Private, total .....	18,288	9,591	713	2,638	2,145	3,201
Oregon Grad Inst Sci Tech ..	18,288	9,591	713	2,638	2,145	3,201
Pacific University .....	0	0	0	0	0	0
Pennsylvania, total .....	1,018,803	676,805	20,177	118,231	149,261	54,329
Public, total .....	515,253	328,672	9,168	57,538	104,231	15,644
Indiana U of PA All Cmp .....	333	196	15	0	81	41
Pennsylvania State U .....	282,659	160,152	7,989	41,736	72,782	0
Temple University .....	53,686	26,548	316	6,011	18,279	2,532
University of Pittsburgh .....	178,575	141,776	848	9,791	13,089	13,071
Private, total .....	503,550	348,133	11,009	60,693	45,030	38,685
Bryn Mawr College .....	2,310	1,277	0	28	1,005	0
Carnegie Mellon U .....	118,261	78,666	5,699	18,180	6,680	9,036
Drexel University .....	20,314	11,335	1,270	4,233	3,476	0
Duquesne University .....	589	297	0	214	39	39
Hahnemann University .....	17,756	9,674	28	957	5,910	1,187
Lehigh University .....	30,869	16,038	1,403	8,088	4,411	929
Phila Col Osteopathic Med ..	1,095	830	28	164	67	6
Phila Col of Phar & Sci .....	755	160	0	595	0	0
The Medical Col of PA .....	24,996	16,990	57	3,681	3,563	705
Thomas Jefferson U .....	51,106	38,293	0	12,813	0	0
U of Pennsylvania .....	233,829	173,593	2,364	11,440	19,649	26,783
Villanova University .....	1,670	980	160	300	230	0
Widener U All Campuses .....	0	0	0	0	0	0
Rhode Island, total .....	103,194	71,515	2,812	3,212	23,481	2,174
Public, total .....	45,942	32,609	2,674	1,387	9,152	120
U of Rhode Island .....	45,942	32,609	2,674	1,387	9,152	120
Private, total .....	57,252	38,906	138	1,825	14,329	2,054
Brown University .....	57,152	38,851	138	1,825	14,284	2,054
Providence College .....	100	55	0	0	45	0

See explanatory information and SOURCE at end of table.



**Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1993**

[Dollars in thousands]

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State, control, and institution,	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
South Carolina, total .....	178,174	73,020	16,057	14,242	52,850	22,005
Public, total .....	178,174	73,020	16,057	14,242	52,850	22,005
Clemson University .....	78,569	23,299	15,296	6,035	29,579	4,360
Med U of South Carolina .....	42,543	21,471	0	1,793	4,255	15,024
U of South Carolina .....	57,062	28,250	761	6,414	19,016	2,621
South Dakota, total .....	21,790	8,872	9,508	486	2,140	784
Public, total .....	21,790	8,872	9,508	486	2,140	784
SD Sch of Mines & Tech .....	3,744	2,328	787	126	495	8
South Dakota State U .....	14,050	5,033	6,875	360	1,210	572
U of South Dakota .....	3,996	1,511	1,846	0	435	204
Tennessee, total .....	277,686	180,177	31,255	15,743	34,150	16,361
Public, total .....	172,222	87,420	30,992	13,220	29,313	11,277
East Tennessee State U .....	1,927	791	123	5	81	927
Memphis State University .....	11,740	3,504	3,350	198	4,024	664
Middle Tennessee State U .....	163	36	0	0	91	36
Tennessee State U .....	5,252	5,245	0	7	0	0
Tennessee Tech U .....	9,478	1,266	4,158	1,288	2,766	0
U of Tennessee System .....	143,662	76,578	23,361	11,722	22,351	9,650
Private, total .....	105,464	92,757	263	2,523	4,837	5,084
Meharry Medical College .....	9,283	9,074	0	0	0	209
Vanderbilt University .....	96,181	83,683	263	2,523	4,837	4,875
Texas, total .....	1,387,088	682,785	157,954	89,554	292,807	163,988
Public, total .....	1,172,197	564,577	151,906	74,311	270,004	111,399
East Texas State U .....	206	39	16	53	0	98
Lamar University .....	3,269	2,158	851	90	141	29
Sam Houston State U .....	1,380	380	862	87	51	0
Stephen F Austin St U .....	1,771	330	424	317	337	363
Texas A&M University .....	322,691	122,533	82,284	27,182	85,772	4,920
Texas Tech University .....	38,119	10,897	10,987	5,284	8,803	2,148
Texas Woman's University .....	1,380	692	507	181	0	0
U North TX Health Sci Ctr .....	5,718	3,753	489	744	0	732
U TX Arlington .....	14,834	3,995	4,296	3,363	3,180	0
U TX Austin .....	249,158	139,126	17,700	4,106	63,821	24,405
U TX Dallas .....	13,371	8,031	1,249	969	2,353	769
U TX El Paso .....	12,480	9,229	2,411	191	175	474
U TX Hlth Sci Ctr Houston .....	58,786	38,664	1,448	6,907	4,247	7,520
U TX Hlth Sci Ctr San Ant .....	75,239	48,467	6,178	6,746	10,019	3,829
U TX MD Anderson Cntr Ctr .....	127,475	41,158	0	0	61,565	24,752
U TX Med Br Galveston .....	67,998	30,555	7,809	4,831	16,344	8,459
U TX SW Med Ctr Dallas .....	114,258	67,943	20	11,173	6,835	28,287
University of North Texas .....	9,026	2,277	3,341	748	699	1,961
University of Houston .....	55,038	34,350	11,034	1,339	5,662	2,653
Private, total .....	214,891	118,208	6,048	15,243	22,803	52,589
Baylor Col of Dentistry .....	754	537	38	101	58	20
Baylor Col of Medicine .....	172,252	87,623	3,215	9,914	21,171	50,329
Baylor University .....	1,275	407	88	133	290	357
Rice University .....	30,403	22,016	2,336	4,550	0	1,501
Southern Methodist U .....	7,037	4,932	371	136	1,216	382
Texas Christian U .....	3,170	2,693	0	409	68	0
University of Dallas .....	0	0	0	0	0	0

See explanatory information and SOURCE at end of table.



**Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1993**

[Dollars in thousands]

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State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Utah, total .....	196,113	136,630	13,075	9,303	29,253	7,852
Public, total .....	182,526	128,663	12,304	7,625	26,241	7,693
University of Utah .....	105,263	83,237	226	4,357	10,908	6,535
Utah State University .....	77,263	45,426	12,078	3,268	15,333	1,158
Private, total .....	13,587	7,967	771	1,678	3,012	159
Brigham Young University ...	13,587	7,967	771	1,678	3,012	159
Vermont, total .....	49,839	31,530	2,666	4,573	8,253	2,817
Public, total .....	49,839	31,530	2,666	4,573	8,253	2,817
U of VT & State Agri Col .....	49,839	31,530	2,666	4,573	8,253	2,817
Virginia, total .....	403,212	227,030	46,285	37,053	67,117	25,727
Public, total .....	380,385	212,680	46,285	34,225	66,989	20,206
Col of William & Mary .....	21,793	10,335	1,285	1,117	8,626	430
George Mason University ....	15,830	9,366	969	1,654	2,656	1,185
Old Dominion University ....	11,875	6,914	3,711	1,250	0	0
University of Virginia .....	118,019	75,580	6,103	10,389	13,078	12,869
VA Polytech Inst & St U .....	135,771	61,708	32,055	13,224	25,381	3,403
Virginia Commonwealth U ...	77,097	48,777	2,162	6,591	17,248	2,319
Private, total .....	22,827	14,350	0	2,828	128	5,521
Eastern Virginia Med Sch ....	15,818	9,753	0	544	0	5,521
Hampton University .....	4,597	4,597	0	0	0	0
Institute of Textile Tech .....	2,412	0	0	2,284	128	0
Washington, total .....	427,763	312,497	13,693	33,506	52,301	15,766
Public, total .....	427,763	312,497	13,693	33,506	52,301	15,766
University of Washington .....	335,329	268,819	8,211	30,780	20,295	7,224
Washington State U .....	92,434	43,678	5,482	2,726	32,006	8,542
West Virginia, total .....	55,021	31,662	2,004	3,973	14,132	3,250
Public, total .....	55,021	31,662	2,004	3,973	14,132	3,250
Marshall University .....	604	570	0	0	34	0
WV Sch of Osteo Med .....	146	0	0	0	146	0
West Virginia University .....	54,271	31,092	2,004	3,973	13,952	3,250
Wisconsin, total .....	444,192	255,195	68,410	18,698	53,725	48,164
Public, total .....	390,607	221,410	67,068	12,844	49,872	39,413
U WI Madison .....	372,362	213,955	60,358	12,392	47,524	38,133
U WI Milwaukee .....	18,245	7,455	6,710	452	2,348	1,280
Private, total .....	53,585	33,785	1,342	5,854	3,853	8,751
Marquette University .....	4,896	2,524	65	801	689	817
Medical Col of Wisconsin ....	48,689	31,261	1,277	5,053	3,164	7,934
Wyoming, total .....	32,556	14,575	4,111	2,268	10,637	965
Public, total .....	32,556	14,575	4,111	2,268	10,637	965
University of Wyoming .....	32,556	14,575	4,111	2,268	10,637	965

See explanatory information and SOURCE at end of table.

**Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1993**

[Dollars in thousands]

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State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Puerto Rico, total .....	50,800	29,786	8,710	505	9,509	2,290
Public, total .....	46,232	25,924	8,248	505	9,324	2,231
U of PR Rio Piedras .....	5,502	3,616	76	123	1,674	13
U of PR Mayaguez .....	23,156	8,487	7,629	382	5,560	1,098
U of PR Med Sci Campus ...	17,574	13,821	543	0	2,090	1,120
Private, total .....	4,568	3,862	462	0	185	59
Catholic U of PR .....	0	0	0	0	0	0
Ponce School of Medicine ...	2,591	2,436	66	0	32	57
U Ctr'l Del Caribe Esc Med ..	1,977	1,426	396	0	153	2

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:**  
e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-30. R&D expenditures at doctorate-granting institutions, by geographic division, State, and science and engineering field: fiscal year 1993**

[Dollars in thousands]

Page 1 of 1

Division and State	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
<b>Total</b>	<b>19,539,885</b>	<b>3,089,750</b>	<b>2,057,390</b>	<b>1,274,199</b>	<b>843,888</b>	<b>10,712,399</b>	<b>331,527</b>	<b>869,229</b>	<b>361,503</b>
<b>New England</b>	<b>1,717,915</b>	<b>274,054</b>	<b>213,497</b>	<b>167,126</b>	<b>78,405</b>	<b>808,837</b>	<b>39,557</b>	<b>98,784</b>	<b>37,655</b>
Connecticut	364,708	31,652	25,034	9,767	10,015	259,802	13,706	13,103	1,629
Maine	24,879	3,004	536	4,712	38	14,214	390	1,985	0
Massachusetts	1,075,820	213,339	172,586	103,214	56,369	402,514	18,706	75,094	33,998
New Hampshire	99,475	10,337	4,575	22,287	1,914	55,893	537	3,372	560
Rhode Island	103,194	14,404	9,483	27,087	9,907	30,688	5,515	5,192	918
Vermont	49,839	1,318	1,283	59	162	45,726	703	38	550
<b>Middle Atlantic</b>	<b>2,938,827</b>	<b>472,617</b>	<b>253,473</b>	<b>111,461</b>	<b>171,803</b>	<b>1,699,786</b>	<b>70,205</b>	<b>121,681</b>	<b>37,801</b>
New Jersey	374,134	64,644	45,771	24,528	20,897	167,966	12,502	27,726	10,100
New York	1,545,890	202,520	139,143	63,159	77,035	977,796	37,093	40,524	8,620
Pennsylvania	1,018,803	205,453	68,559	23,774	73,871	554,024	20,610	53,431	19,081
<b>East North Central</b>	<b>2,785,835</b>	<b>464,358</b>	<b>324,965</b>	<b>102,902</b>	<b>97,083</b>	<b>1,447,865</b>	<b>61,084</b>	<b>175,251</b>	<b>112,327</b>
Illinois	748,036	90,510	95,236	34,051	34,085	365,759	17,765	29,460	81,170
Indiana	302,811	48,195	59,713	4,530	9,541	153,343	7,329	11,944	8,216
Michigan	699,957	114,577	71,390	28,762	27,094	359,505	18,041	69,811	10,777
Ohio	590,839	156,106	58,135	8,835	16,886	304,578	6,513	30,365	9,421
Wisconsin	444,192	54,970	40,491	26,724	9,477	264,680	11,436	33,671	2,743
<b>West North Central</b>	<b>1,341,149</b>	<b>158,193</b>	<b>83,288</b>	<b>38,542</b>	<b>39,753</b>	<b>932,763</b>	<b>17,566</b>	<b>48,577</b>	<b>22,467</b>
Iowa	298,745	51,677	22,828	1,348	11,463	187,354	1,842	16,543	5,690
Kansas	154,103	20,357	10,668	8,331	1,631	95,131	2,271	2,931	12,783
Minnesota	332,033	28,856	16,735	13,185	17,167	236,421	7,548	12,121	0
Missouri	344,566	29,589	20,083	6,737	7,580	262,906	4,931	10,411	2,329
Nebraska	135,737	11,263	7,504	4,198	1,335	108,615	578	2,244	0
North Dakota	54,175	14,032	4,406	1,635	575	28,807	285	3,048	1,387
South Dakota	21,790	2,419	1,064	3,108	2	13,529	111	1,279	278
<b>South Atlantic</b>	<b>3,621,465</b>	<b>665,340</b>	<b>393,936</b>	<b>240,624</b>	<b>224,595</b>	<b>1,849,293</b>	<b>45,500</b>	<b>169,320</b>	<b>32,857</b>
Delaware	52,627	16,231	8,787	7,034	2,997	11,402	572	5,604	0
District of Columbia	145,218	11,161	15,059	709	9,266	91,130	2,780	14,683	430
Florida	488,551	64,484	66,160	52,065	11,560	247,614	12,440	21,322	12,906
Georgia	546,960	137,543	39,342	15,229	34,110	272,965	9,760	36,864	1,147
Maryland	1,147,121	253,555	183,473	75,890	123,049	459,687	3,547	32,122	15,798
North Carolina	604,581	56,759	31,506	24,433	16,947	437,277	8,325	29,055	279
South Carolina	178,174	34,112	11,301	12,951	7,918	95,859	1,716	12,578	1,739
Virginia	403,212	80,311	35,974	45,742	12,384	207,710	6,320	14,674	97
West Virginia	55,021	11,184	2,334	6,571	6,364	25,649	40	2,418	461
<b>East South Central</b>	<b>787,043</b>	<b>134,220</b>	<b>64,250</b>	<b>27,482</b>	<b>18,483</b>	<b>493,402</b>	<b>8,321</b>	<b>22,529</b>	<b>18,356</b>
Alabama	281,209	47,879	25,116	5,528	6,087	185,035	1,823	6,107	3,634
Kentucky	122,409	17,845	4,803	704	1,471	87,111	690	3,146	6,639
Mississippi	105,739	19,265	12,375	3,862	657	58,068	619	4,283	6,610
Tennessee	277,686	49,231	21,956	17,388	10,268	163,188	5,189	8,993	1,473
<b>West South Central</b>	<b>1,889,238</b>	<b>309,687</b>	<b>168,807</b>	<b>149,145</b>	<b>54,980</b>	<b>1,097,843</b>	<b>18,371</b>	<b>72,721</b>	<b>17,684</b>
Arkansas	74,011	8,733	5,302	1,188	1,174	53,186	583	2,806	1,039
Louisiana	255,171	33,934	13,971	19,629	7,667	158,759	2,265	16,950	1,996
Oklahoma	172,968	35,851	15,820	13,958	5,048	79,939	3,298	15,620	3,434
Texas	1,387,088	231,169	133,714	114,370	41,091	805,959	12,225	37,345	11,215
<b>Mountain</b>	<b>1,233,199</b>	<b>253,497</b>	<b>163,745</b>	<b>146,623</b>	<b>37,241</b>	<b>509,879</b>	<b>25,005</b>	<b>47,216</b>	<b>49,993</b>
Arizona	310,721	42,490	83,847	25,253	8,210	121,490	6,198	19,104	4,129
Colorado	331,081	50,234	42,483	44,151	8,814	150,063	12,771	8,527	14,038
Idaho	48,774	7,000	1,876	2,890	185	34,731	78	1,075	939
Montana	48,080	4,383	4,332	737	2,245	31,974	57	2,577	1,775
Nevada	79,124	7,480	2,714	31,095	2,064	20,680	285	6,343	8,463
New Mexico	186,750	92,716	9,436	17,312	5,651	43,237	2,136	5,947	10,315
Utah	196,113	46,986	17,000	17,330	9,724	91,025	3,189	3,377	7,482
Wyoming	32,556	2,208	2,057	7,855	348	16,679	291	266	2,852
<b>Pacific</b>	<b>3,174,414</b>	<b>354,642</b>	<b>388,126</b>	<b>287,529</b>	<b>121,073</b>	<b>1,834,734</b>	<b>45,722</b>	<b>111,238</b>	<b>31,350</b>
Alaska	66,796	2,735	14,134	32,623	72	14,797	0	2,435	0
California	2,380,144	306,077	305,685	157,357	104,628	1,382,555	33,823	76,576	13,443
Hawaii	73,961	1,840	22,267	10,262	1,020	29,276	753	3,612	4,931
Oregon	225,750	16,777	22,896	31,774	8,605	133,397	4,076	7,397	828
Washington	427,763	27,213	23,144	55,513	6,748	274,709	7,070	21,218	12,148
<b>Outlying Areas</b>	<b>50,800</b>	<b>3,142</b>	<b>3,303</b>	<b>2,765</b>	<b>472</b>	<b>37,997</b>	<b>196</b>	<b>1,912</b>	<b>1,013</b>

SOURCE: National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1993**

[Dollars in thousands]

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State and Institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
United States, total .....	19,539,885	3,089,750	2,057,390	1,274,199	843,888	10,712,399	331,527	869,229	361,503
Public, total .....	13,078,749	2,060,692	1,331,606	993,677	429,958	7,132,273	230,625	641,426	258,492
Private, total .....	6,461,136	1,029,058	725,784	280,522	413,930	3,580,126	100,902	227,803	103,011
Alabama, total .....	281,209	47,879	25,116	5,528	6,087	185,035	1,823	6,107	3,634
Public, total .....	281,209	47,879	25,116	5,528	6,087	185,035	1,823	6,107	3,634
Alabama A&M University .....	9,316	251	4,469	0	0	4,354	0	242	0
Auburn University .....	68,151	19,690	4,003	231	448	40,054	224	982	2,519
The University of Alabama ..	23,149	7,422	5,291	1,527	857	3,450	407	3,866	329
U of Alabama Birmingham ..	133,790	5,271	703	586	127	125,857	936	310	0
U of Alabama Huntsville .....	34,153	15,097	10,433	2,819	4,565	472	0	75	692
U of South Alabama .....	12,650	148	217	365	90	10,848	256	632	94
Alaska, total .....	66,796	2,735	14,134	32,623	72	14,797	0	2,435	0
Public, total .....	66,796	2,735	14,134	32,623	72	14,797	0	2,435	0
U of Alaska Fairbanks .....	66,796	2,735	14,134	32,623	72	14,797	0	2,435	0
Arizona, total .....	310,721	42,490	83,847	25,253	8,210	121,490	6,198	19,104	4,129
Public, total .....	310,721	42,490	83,847	25,253	8,210	121,490	6,198	19,104	4,129
Arizona State University .....	66,142	21,893	16,914	3,836	2,015	7,438	3,432	8,163	2,451
Northern Arizona U .....	9,051	504	1,013	784	118	3,432	644	2,256	300
University of Arizona .....	235,528	20,093	65,920	20,633	6,077	110,620	2,122	8,685	1,378
Arkansas, total .....	74,011	8,733	5,302	1,188	1,174	53,186	583	2,806	1,039
Public, total .....	74,011	8,733	5,302	1,188	1,174	53,186	583	2,806	1,039
U Arkansas Fayetteville .....	58,325	8,733	5,302	1,188	1,174	37,500	583	2,806	1,039
U Arkansas Med Sci .....	15,686	0	0	0	0	15,686	0	0	0
California, total .....	2,380,144	306,077	305,685	157,357	104,628	1,382,555	33,823	76,576	13,443
Public, total .....	1,735,381	166,247	199,863	123,908	47,011	1,097,912	26,522	62,621	11,297
CA St U Long Beach .....	4,507e	3,381e	336e	394e	0e	358e	25e	0e	13e
San Diego St University .....	32,493	3,586	1,761	629	1,794	15,836	2,902	1,249	4,736
U CA Berkeley .....	284,346	62,019	63,693	4,888	7,320	114,359	6,870	20,842	4,355
U CA Davis .....	223,758	15,487	8,859	1,490	654	193,843	913	2,512	0
U CA Irvine .....	100,631	8,655	15,236	25	4,373	66,886	79	4,821	556
U CA Los Angeles .....	277,974	27,799	24,577	14,196	7,430	178,798	7,435	17,739	0
U CA Riverside .....	59,065	552	5,164	1,673	1,017	49,153	753	753	0
U CA San Diego .....	307,051	13,738	43,430	78,807	10,934	153,495	3,545	3,102	0
U CA San Francisco .....	314,599	0	0	0	0	314,599	0	0	0
U CA Santa Barbara .....	68,775	23,798	16,588	10,085	5,531	3,142	3,155	6,366	110
U CA Santa Cruz .....	37,886	0	17,800	7,805	1,636	6,993	845	2,807	0
U CA System .....	0	0	0	0	0	0	0	0	0
US Naval Postgrad School ..	24,296	7,232	2,419	3,916	6,322	450	0	2,430	1,527
Private, total .....	644,763	139,830	105,822	33,449	57,617	284,643	7,301	13,955	2,146
Biola University .....	0	0	0	0	0	0	0	0	0
C R Drew U of Med & Sci .....	6,852	0	0	0	0	6,852	0	0	0
CA Inst of Integral Stu .....	0	0	0	0	0	0	0	0	0
CA Sch Prof Psy Alameda ..	0	0	0	0	0	0	0	0	0
CA Sch Prof Psy Fresno .....	616	0	0	0	0	0	616e	0	0
CA Sch Prof Psy L.A. ....	427	0	0	0	0	0	427	0	0
CA Sch Prof Psy S Diego .....	66	0	0	0	0	0	66	0	0
California Inst of Tech .....	115,439	20,384	51,180	12,870	7,001	21,982	0	891	1,131
Claremont Graduate Sch .....	1,011	0	0	0	17	0	174	820	0
Col Osteo Med of Pacific .....	39	0	0	0	0	39	0	0	0
Fielding Institute .....	0	0	0	0	0	0	0	0	0
Fuller Theological Sem .....	110	0	0	0	0	0	110	0	0
Golden Gate University .....	0	0	0	0	0	0	0	0	0
Loma Linda University .....	9,030	0	0	196	0	8,834	0	0	0
Pacific Grad Sch of Psy .....	0	0	0	0	0	0	0	0	0

See explanatory information and SOURCE at end of table.

**Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1993**

[Dollars in thousands]

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State and Institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
California, continued:									
Private, continued:									
Pepperdine University .....	0	0	0	0	0	0	0	0	0
RAND Grad Sch Pol Stu .....	0	0	0	0	0	0	0	0	0
Santa Clara University .....	1,815	989	119	0	84	254	8	361	0
Stanford University .....	306,676	90,770	46,532	5,761	13,391	142,057	3,559	4,606	0
The Wright Institute .....	0	0	0	0	0	0	0	0	0
U of Southern California .....	200,822	27,576	7,843	14,596	37,087	103,156	2,330	7,237	997
US International U .....	0	0	0	0	0	0	0	0	0
University of San Diego .....	736	111i	67i	26i	37i	426i	11i	40i	18i
University of the Pacific .....	1,124	0	81	0	0	1,043	0	0	0
Colorado, total .....	331,081	50,234	42,483	44,151	8,814	150,063	12,771	8,527	14,038
Public, total .....	322,486	49,667	38,951	44,130	8,768	148,994	10,147	7,791	14,038
Colorado School of Mines .....	13,644	10,588	1,611	520	925	0	0	0	0
Colorado State University .....	115,385	16,137	8,372	11,427	1,520	57,825	2,141	3,994	13,969
U of Northern Colorado .....	240	0	0	97	0	137	0	6	0
University of Colorado .....	193,217	22,942	28,968	32,086	6,323	91,032	8,006	3,791	69
Private, total .....	8,595	567	3,532	21	46	1,069	2,624	736	0
University of Denver .....	8,595	567	3,532	21	46	1,069	2,624	736	0
Connecticut, total .....	364,708	31,652	25,034	9,767	10,015	259,802	13,706	13,103	1,629
Public, total .....	133,054	24,452	3,703	7,387	3,145	76,948	7,241	8,549	1,629
University of Connecticut .....	133,054	24,452	3,703	7,387	3,145	76,948	7,241	8,549	1,629
Private, total .....	231,654	7,200	21,331	2,380	6,870	182,854	6,465	4,554	0
University of Hartford .....	0e	0e	0e	0e	0e	0e	0e	0e	0e
Wesleyan University .....	4,804	0i	1,858i	66i	732i	1,863i	167i	118i	0i
Yale University .....	226,850	7,200	19,473	2,314	6,138	180,991	6,298	4,436	0
Delaware, total .....	52,627	16,231	8,787	7,034	2,997	11,402	572	5,604	0
Public, total .....	52,627	16,231	8,787	7,034	2,997	11,402	572	5,604	0
University of Delaware .....	52,627	16,231	8,787	7,034	2,997	11,402	572	5,604	0
District of Columbia, total .....	145,218	11,161	15,059	709	9,266	91,130	2,780	14,683	430
Private, total .....	145,218	11,161	15,059	709	9,266	91,130	2,780	14,683	430
American University .....	3,903	0	1,331	0	63	1,105	262	1,142	0
Catholic U of America .....	7,926	1,167	4,978	0	0	469	524	788	0
George Washington U .....	41,177	6,883	1,148	33	6,858	15,828	1,297	9,119	11
Georgetown University .....	73,785	0	5,418	676	1,264	63,357	84	2,780	206
Howard University .....	18,427	3,111	2,184	0	1,081	10,371	613	854	213
Florida, total .....	488,551	64,484	66,160	52,065	11,560	247,614	12,440	21,322	12,906
Public, total .....	360,690	61,226	63,703	27,133	10,527	162,545	11,261	11,452	12,843
Florida A&M University .....	22,777	3,314i	2,235i	0i	91i	17,120i	5i	12i	0i
Florida Atlantic U .....	11,331	5,767	293	44	1,674	551	1,231	1,771	0
Florida International U .....	11,443	5,693	1,018	208	735	1,479	517	1,793	0
Florida State University .....	62,929	906	38,281	10,178	1,519	6,720	2,233	3,092	0
U of Central Florida .....	33,922	5,908	8,073	8,225	989	596	369	591	9,171
U of South Florida .....	75,322	10,726	1,560	6,772	140	50,539	4,342	1,243	0
University of Florida .....	142,966	28,912	12,243	1,706	5,379	85,540	2,564	2,950	3,672
Private, total .....	127,861	3,258	2,457	24,932	1,033	85,069	1,179	9,870	63
Florida Inst of Tech .....	5,866	1,578	1,167	1,182	484	1,436	17	0	2
Nova University .....	1,120	0	0	902	0	0	163	1	54
University of Miami .....	120,875	1,680	1,290	22,848	549	83,633	999	9,869	7

See explanatory information and SOURCE at end of table.

**Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1993**

[Dollars in thousands]

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State and Institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Georgia, total .....	546,960	137,543	39,342	15,229	34,110	272,965	9,760	36,864	1,147
Public, total .....	385,215	119,669	26,370	15,102	31,914	152,380	8,771	30,286	723
Georgia Institute of Tech .....	175,873	115,523	15,761	7,640	23,999	3,690	1,492	7,632	136
Georgia State University .....	12,133	0	2,778	275	676	2,976	2,969	1,872	587
Medical Col of Georgia .....	24,935	0	0	0	0	24,935	0	0	0
University of Georgia .....	172,274	4,146	7,831	7,187	7,239	120,779	4,310	20,782	0
Private, total .....	161,745	17,874	12,972	127	2,196	120,585	989	6,578	424
Clark Atlanta University .....	12,057	1,378	3,695	125	1,900	4,706	0	253	0
Emory University .....	120,125	0	6,032	2	296	106,481	989	6,325	0
Inst Paper Sci and Tech .....	8,344	4,712	3,015	0	0	617	0	0	0
Mercer University .....	13,771	11,784	230	0	0	1,757	0	0	0
Morehouse School of Med .....	7,448	0	0	0	0	7,024	0	0	424
Hawaii, total .....	73,961	1,840	22,267	10,262	1,020	29,276	753	3,612	4,931
Public, total .....	73,961	1,840	22,267	10,262	1,020	29,276	753	3,612	4,931
University Hawaii Manoa .....	73,961	1,840	22,267	10,262	1,020	29,276	753	3,612	4,931
Idaho, total .....	48,774	7,000	1,876	2,890	185	34,731	78	1,075	939
Public, total .....	48,774	7,000	1,876	2,890	185	34,731	78	1,075	939
Idaho State University .....	4,119	280	290	96	13	2,291	0	210	939
University of Idaho .....	44,655	6,720	1,586	2,794	172	32,440	78	865	0
Illinois, total .....	748,036	90,510	95,236	34,051	34,085	365,759	17,765	29,460	81,170
Public, total .....	400,489	65,725	52,927	30,035	24,493	151,123	8,805	22,820	44,561
Illinois State University .....	4,535	0	364	36	587	975	55	2,518	0
Northern Illinois U .....	11,215	874	2,116	584	448	3,483	397	3,313	0
Sthm IL U Carbondale .....	26,376	3,491	1,723	583	2,035	12,598	183	1,353	4,430
University of IL Chicago .....	105,552	8,056	8,207	1,061	2,415	79,538	2,082	2,727	1,466
University of IL Urbana .....	252,811	53,304	40,517	27,791	19,008	54,529	6,088	12,909	38,665
Private, total .....	347,547	24,785	42,309	4,016	9,592	214,636	8,960	6,640	36,609
Chicago Sch of Prof Psy .....	0	0	0	0	0	0	0	0	0
DePaul University .....	1,510	0	23	0	47	109	1,166	165	0
Finch U Hlth Sci Chicago .....	6,928	0	0	0	0	6,873	55	0	0
Illinois Inst of Tech .....	8,252	3,768	870	120	121	2,917	382	44	30
Loyola U of Chicago .....	29,232	0	675	0	959	25,291	156	1,642	509
Midwestern University .....	1,482	0	0	0	0	1,482	0	0	0
Northwestern University .....	154,227	21,017	11,949	790	4,928	75,472	1,867	2,134	36,070
Rush University .....	34,039	0	0	0	0	29,897	4,142	0	0
University of Chicago .....	111,877	0	28,792	3,106	3,537	72,595	1,192	2,655	0
Indiana, total .....	302,811	48,195	59,713	4,530	9,541	153,343	7,329	11,944	8,216
Public, total .....	279,066	41,604	46,349	4,511	9,182	150,414	7,059	11,869	8,078
Ball State University .....	1,322	210	304	34	55	667	21	31	0
Indiana State University .....	835	0	90	89	0	489	33	51	83
Indiana University .....	127,877	940	29,225	2,167	3,169	75,107	4,704	4,785	7,780
Purdue University .....	149,032	40,454	16,730	2,221	5,958	74,151	2,301	7,002	215
Private, total .....	23,745	6,591	13,364	19	359	2,929	270	75	138
University of Notre Dame .....	23,745	6,591	13,364	19	359	2,929	270	75	138
Iowa, total .....	298,745	51,677	22,828	1,348	11,463	187,354	1,842	16,543	5,690
Public, total .....	298,349	51,677	22,828	1,348	11,463	186,958	1,842	16,543	5,690
Iowa St U of Sci & Tech .....	148,459	35,955	5,944	819	10,300	79,053	770	11,636	3,982
U of Iowa .....	148,811	15,181	16,855	501	1,163	107,808	1,066	4,682	1,555
U of Northern Iowa .....	1,079	541	29	28	0	97	6	225	153

See explanatory information and SOURCE at end of table.



**Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1993**

[Dollars in thousands]

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State and Institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Iowa, continued:									
Private, total .....	396	0	0	0	0	396	0	0	0
Maharishi International U .....	0e	0e	0e	0e	0e	0e	0e	0e	0e
U Osteo Med & Hlth Sci .....	396	0	0	0	0	396	0	0	0
Kansas, total .....	154,103	20,357	10,668	8,331	1,631	95,131	2,271	2,931	12,783
Public, total .....	154,103	20,357	10,668	8,331	1,631	95,131	2,271	2,931	12,783
KS St U Agri & App Sci .....	62,562	9,091	4,214	243	950	44,871	488	1,611	1,094
University of Kansas .....	85,134	6,269	5,997	8,026	418	49,786	1,779	1,170	11,689
Wichita State University .....	6,407	4,997	457	62	263	474	4	150	0
Kentucky, total .....	122,409	17,845	4,803	704	1,471	87,111	690	3,146	6,639
Public, total .....	122,407	17,845	4,803	704	1,471	87,109	690	3,146	6,639
University of Kentucky .....	102,911	16,729	2,759	144	1,266	72,789	607	1,978	6,639
University of Louisville .....	19,496	1,116	2,044	560	205	14,320	83	1,168	0
Private, total .....	2	0	0	0	0	2	0	0	0
Spalding University .....	2	0	0	0	0	2	0	0	0
Louisiana, total .....	255,171	33,934	13,971	19,629	7,667	158,759	2,265	16,950	1,996
Public, total .....	176,368	26,880	10,932	19,236	7,172	98,703	959	10,658	1,828
Louisiana State U System .....	158,823	24,145	10,377	19,076	1,738	95,758	800	5,803	1,126
Louisiana Tech University .....	3,582	1,484	82	0	134	488	0	1,394	0
Northeast Louisiana U .....	2,644	0	30	49	0	88	39	2,438	0
U of Southwestern LA .....	11,319	1,251	443	111	5,300	2,369	120	1,023	702
Private, total .....	78,803	7,054	3,039	393	495	60,056	1,306	6,292	168
Tulane University .....	75,634	7,054	2,259	290	495	57,770	1,306	6,292	168
Xavier University of LA .....	3,169	0	780	103	0	2,286	0	0	0
Maine, total .....	24,879	3,004	536	4,712	38	14,214	390	1,985	0
Public, total .....	24,879	3,004	536	4,712	38	14,214	390	1,985	0
U of Maine Orono .....	24,879	3,004	536	4,712	38	14,214	390	1,985	0
Maryland, total .....	1,147,121	253,555	183,473	75,890	123,049	459,687	3,547	32,122	15,798
Public, total .....	401,606	50,491	67,440	32,010	15,633	210,257	2,703	23,072	0
U MD Baltimore County .....	7,544	1,780	1,969	0	730	1,714	336	1,015	0
U MD Baltimore Prof Sch .....	111,772	0	0	0	0	111,772	0	0	0
U MD Center for EES .....	19,055	0	0	19,055	0	0	0	0	0
U MD College Park .....	229,344	48,698	65,431	12,858	14,698	63,254	2,367	22,038	0
U MD Eastern Shore .....	3,045	13	40	97	205	2,671	0	19	0
Unif Svcs U of Hlth Sci .....	30,846	0	0	0	0	30,846	0	0	0
Private, total .....	745,515	203,064	116,033	43,880	107,416	249,430	844	9,050	15,798
Johns Hopkins U .....	745,515	203,064	116,033	43,880	107,416	249,430	844	9,050	15,798
Massachusetts, total .....	1,075,820	213,339	172,586	103,214	56,369	402,514	18,706	75,094	33,998
Public, total .....	142,425	15,223	19,916	8,042	12,908	73,969	3,010	7,187	2,170
U MA Amherst .....	64,111	9,629	15,077	6,383	12,259	17,123	2,637	723	280
U MA Boston .....	9,745	0	275	1,573	23	1,111	304	6,459	0
U MA Lowell .....	14,292	5,594	4,564	86	626	1,458	69	5	1,890
U MA Worcester .....	54,277	0	0	0	0	54,277	0	0	0
Private, total .....	933,395	198,116	152,670	95,172	43,461	328,545	15,696	67,907	31,828
Boston College .....	10,731	0	2,574	587	6,211	807	190	362	0
Boston University .....	91,158	7,049	10,463	1,117	3,173	63,741	435	1,824	3,356
Brandeis University .....	36,213	0	3,387	0	1,080	16,766	1,385	13,595	0

See explanatory information and SOURCE at end of table.

**Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1993**

[Dollars in thousands]

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State and Institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Massachusetts, continued:									
Private, continued:									
Clark University .....	2,311	0	1,130	665	63	78	313	62	0
Harvard University .....	257,207	5,274	28,041	9,054	3,963	159,744	3,251	41,102	6,778
MA Col Phar Allied Hlth .....	181	0	0	0	0	181	0	0	0
MA Institute of Tech .....	365,553	155,174	101,256	14,666	20,388	35,792	8,043	8,540	21,694
Northeastern University .....	18,517	6,465	3,515	321	2,236	4,734	995	251	0
Smith College .....	1,545i	0i	208i	207i	136i	335i	178i	481i	0i
Tufts University .....	56,976	2,219	1,797	4,035	143	46,187	906	1,689	0
Woods Hole Ocngrphc Inst .....	81,519	16,999	0	64,520	0	0	0	0	0
Worcester Polytech Inst .....	11,484	4,936	299	0	6,068	180	0	1	0
Michigan, total .....	699,957	114,577	71,390	28,762	27,094	359,505	18,041	69,811	10,777
Public, total .....	697,511	114,305	70,157	28,381	27,093	359,237	18,041	69,520	10,777
Central Michigan U .....	1,733	79	339	139	148	395	339	294	0
Michigan State University .....	150,861	18,114	27,577	893	2,642	84,705	3,598	11,771	1,561
Michigan Tech University .....	18,696	11,940i	1,943i	637i	181i	2,973i	0i	897i	125i
Oakland University .....	6,096	815	931	0	360	3,613	174	25	178
University of Michigan .....	425,868	74,735	30,577	23,999	21,855	203,823	11,952	52,042	6,885
Wayne State University .....	85,627	7,014	8,517	0	767	62,874	1,872	2,660	1,923
Western Michigan U .....	8,630	1,608	273	2,713	1,140	854	106	1,831	105
Private, total .....	2,446	272	1,233	381	1	268	0	291	0
Andrews University .....	377	5	24	2	1	54	0	291	0
U of Detroit Mercy .....	2,069	267	1,209	379	0	214	0	0	0
Minnesota, total .....	332,033	28,856	16,735	13,185	17,167	236,421	7,548	12,121	0
Public, total .....	332,033	28,856	16,735	13,185	17,167	236,421	7,548	12,121	0
University of Minnesota .....	332,033	28,856	16,735	13,185	17,167	236,421	7,548	12,121	0
Private, total .....	0	0	0	0	0	0	0	0	0
Mayo Grad Sch of Med .....	0	0	0	0	0	0	0	0	0
Mississippi, total .....	105,739	19,265	12,375	3,862	657	58,068	619	4,283	6,610
Public, total .....	105,739	19,265	12,375	3,862	657	58,068	619	4,283	6,610
Jackson State University .....	4,371	45	1,536	159	200	1,951	351	129	0
Mississippi State U .....	70,300	15,993	2,079	2,833	270	40,198	0	3,357	5,570
U Southern Mississippi .....	7,334	21	4,196	870	80	919	7	201	1,040
University of Mississippi .....	23,734	3,206	4,564	0	107	15,000	261	596	0
Missouri, total .....	344,566	29,589	20,083	6,737	7,580	262,906	4,931	10,411	2,329
Public, total .....	140,790	26,079	12,310	2,444	1,966	84,496	1,478	9,698	2,319
U of Missouri Columbia .....	106,193	12,362	7,621	1,570	674	74,708	1,128	7,658	472
U of Missouri Kansas City .....	10,976	11	723	37	838	8,439	5	550	373
U of Missouri Rolla .....	18,025	13,706	2,472	723	298	67	2	29	728
U of Missouri St Louis .....	4,681	0	1,494	0	156	481	343	1,461	746
U of Missouri System Off .....	915	0	0	114	0	801	0	0	0
Private, total .....	203,776	3,510	7,773	4,293	5,614	178,410	3,453	713	10
Forest Inst of Prof Psy .....	2,717	0	0	0	0	0	2,717	0	0
Kirksville Col Osteo Med .....	829	0	0	0	0	829	0	0	0
St Louis University .....	20,826	0	8	854	68	19,886	0	0	10
U of Health Sci (MO) .....	75	0	0	0	0	75	0	0	0
Washington University .....	179,329	3,510	7,765	3,439	5,546	157,620	736	713	0
Montana, total .....	48,080	4,383	4,332	737	2,245	31,974	57	2,577	1,775
Public, total .....	48,080	4,383	4,332	737	2,245	31,974	57	2,577	1,775
Montana State University .....	32,911	4,383	3,823	395	374	22,132	32	1,248	524
University of Montana .....	15,169	0	509	342	1,871	9,842	25	1,329	1,251

See explanatory information and SOURCE at end of table.



**Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1993**

[Dollars in thousands]

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State and Institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Nebraska, total .....	135,737	11,263	7,504	4,198	1,335	108,615	578	2,244	0
Public, total .....	126,628	11,263	7,389	4,186	1,335	99,633	578	2,244	0
U of NE Med Ctr Omaha .....	31,669	0	0	0	0	31,669	0	0	0
U of Nebraska Lincoln .....	94,959	11,263	7,389	4,186	1,335	67,964	578	2,244	0
Private, total .....	9,109	0	115	12	0	8,982	0	0	0
Creighton University .....	9,109	0	115	12	0	8,982	0	0	0
Nevada, total .....	79,124	7,480	2,714	31,095	2,064	20,680	285	6,343	8,463
Public, total .....	79,124	7,480	2,714	31,095	2,064	20,680	285	6,343	8,463
Desert Research Institute .....	21,187	0	0	14,680	0	3,500	0	3,007	0
U of Nevada Las Vegas .....	19,373	2,275	804	11,234	1,979	1,405	5	1,333	338
U of Nevada Reno .....	38,564	5,205	1,910	5,181	85	15,775	280	2,003	8,125
New Hampshire, total .....	99,475	10,337	4,575	22,287	1,914	55,893	537	3,372	560
Public, total .....	39,555	4,198	1,599	20,840	799	8,724	211	2,651	533
U of New Hampshire .....	39,555	4,198	1,599	20,840	799	8,724	211	2,651	533
Private, total .....	59,920	6,139	2,976	1,447	1,115	47,169	326	721	27
Dartmouth College .....	59,920	6,139	2,976	1,447	1,115	47,169	326	721	27
New Jersey, total .....	374,134	64,644	45,771	24,528	20,897	167,966	12,502	27,726	10,100
Public, total .....	261,216	26,361	20,547	16,441	12,128	150,060	6,927	18,684	10,068
NJ Inst of Technology .....	23,781	7,429	1,485	8,007	660	0	0	84	6,116
Rutgers the State U NJ .....	161,025	18,932	19,062	8,434	11,468	73,650	6,927	18,600	3,952
U Med & Dent NJ .....	76,410	0	0	0	0	76,410	0	0	0
Private, total .....	112,918	38,283	25,224	8,087	8,769	17,906	5,575	9,042	32
Fairleigh Dickinson U .....	140	0	22	0	16	19	7	44	32
Princeton University .....	98,603	24,916	24,518	8,087	8,749	17,767	5,568	8,998	0
Seton Hall University .....	171	0	51	0	0	120	0	0	0
Stevens Institute Tech .....	14,004	13,367	633	0	4	0	0	0	0
New Mexico, total .....	186,750	92,716	9,436	17,312	5,651	43,237	2,136	5,947	10,315
Public, total .....	186,750	92,716	9,436	17,312	5,651	43,237	2,136	5,947	10,315
NM Inst Mining & Tech .....	24,040	16,757	2,143	4,606	303	210	1	20	0
New Mexico State U .....	85,974	45,450	2,903	10,719	3,447	20,763	52	1,024	1,616
University of New Mexico .....	76,736	30,509	4,390	1,987	1,901	22,264	2,083	4,903	8,699
New York, total .....	1,545,890	202,520	139,143	63,159	77,035	977,796	37,093	40,524	8,620
Public, total .....	354,157	35,748	35,021	26,608	15,069	213,489	15,945	11,970	307
CUNY Grad Sch & U Ctr .....	3,125	0	0	0	294	1,572	804	399	56
CUNY H H Lehman Col .....	0e	0e	0e	0e	0e	0e	0e	0e	0e
SUNY Albany .....	37,860	0	2,540	7,274	669	19,869	3,765	3,743	0
SUNY Binghamton .....	13,760	2,141	1,980	998	1,168	2,015	3,425	2,033	0
SUNY Buffalo .....	128,203	23,732	7,067	686	7,364	80,868	5,051	3,333	102
SUNY Col Env Sci & Frstry .....	21,856	7,074	1,293	2,187	179	10,918	0	205	0
SUNY Col of Optometry .....	377	0	0	0	0	377	0	0	0
SUNY Hlth Sci Ctr Brklyn .....	27,645	0	0	0	0	27,645	0	0	0
SUNY Hlth Sci Ctr Syrcse .....	13,514	0	0	0	0	13,514	0	0	0
SUNY Stony Brook .....	107,817	2,801	22,141	15,463	5,395	56,711	2,900	2,257	149
Private, total .....	1,191,733	166,772	104,122	36,551	61,966	764,307	21,148	28,554	8,313
Adelphi University .....	370	0	315	0	0	55	0	0	0
Albany Medical College .....	11,845	0	0	0	0	11,845	0	0	0
Alfred University .....	4,479	0	0	0	0	0	0	0	0
CUNY Mt Sinai Sch of Med .....	75,337	0	0	0	0	75,337	0	0	0
Clarkson University .....	10,586	7,611	1,559	0	805	537	74	0	0

See explanatory information and SOURCE at end of table.

**Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1993**

[Dollars in thousands]

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State and Institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
New York, continued:									
Private, continued:									
Columbia U Main Division .....	204,710	14,743	18,125	28,472	3,887	132,312	2,173	4,998	0
Columbia U Teachers Col .....	79	0	0	0	55	0	23	1	0
Cornell University .....	310,949	43,369	44,976	5,359	31,930	171,569	3,321	10,425	0
Fordham University .....	1,737	0	17	0	50	399	23	1,248	0
Hofstra University .....	1,073	364	0	0	563	146	0	0	0
Long Island University .....	278	27	72	43	0	38	0	11	87
New Sch for Soci Res .....	1,559	0	0	0	0	17	299	1,243	0
New York Inst Technology .....	402	104	0	0	0	298	0	0	0
New York Medical College .....	18,491	0i	0i	0i	0i	18,491i	0i	0i	0i
New York University .....	129,774	0	3,847	332	11,108	99,503	7,017	6,936	1,031
Pace University All Cmp .....	0e	0e	0e	0e	0e	0e	0e	0e	0e
Polytechnic University .....	9,424	6,828i	2,442i	0i	72i	0i	0i	0i	82i
Rensselaer Polytech Inst .....	44,132	31,787	7,007	951	2,879	657	10	341	500
Rochester Inst of Tech .....	6,331	333	5	0	20	1,023	0	39	4,911
Rockefeller University .....	74,396	0	6,037	0	1,082	67,277	0	0	0
St John's University (NY) .....	860	0	0	0	0	667	186	7	0
Syracuse University .....	32,443	9,938	5,255	967	6,720	4,631	1,330	2,254	1,348
Union College (NY) .....	1,032	473	152	53	52	139	10	105	48
University of Rochester .....	161,810	46,716	14,313	374	2,743	89,730	6,682	946	306
Yeshiva University .....	89,636	0	0	0	0	89,636	0	0	0
North Carolina, total .....	604,581	56,759	31,506	24,433	16,947	437,277	8,325	29,055	279
Public, total .....	344,501	48,244	18,356	20,409	13,594	221,881	3,123	18,887	7
East Carolina University .....	7,360	0	144	1,571	9	5,273	0	363	0
NC State U Raleigh .....	155,624	48,244	8,785	8,945	4,902	81,135	364	3,249	0
U of NC Chapel Hill .....	179,157	0	9,246	9,893	8,649	133,978	2,441	14,950	0
U of NC Greensboro .....	2,360	0	181	0	34	1,495	318	325	7
Private, total .....	260,080	8,515	13,150	4,024	3,353	215,396	5,202	10,168	272
Duke University .....	202,434	8,515	12,286	4,024	3,265	158,918	5,202	10,168	56
Wake Forest University .....	57,646	0	864	0	88	56,478	0	0	216
North Dakota, total .....	54,175	14,032	4,406	1,635	575	28,807	285	3,048	1,387
Public, total .....	54,175	14,032	4,406	1,635	575	28,807	285	3,048	1,387
North Dakota State U .....	34,971	3,264	4,241	104	575	24,543	266	1,767	211
University North Dakota .....	19,204	10,768	165	1,531	0	4,264	19	1,281	1,176
Ohio, total .....	590,839	156,106	58,135	8,835	16,886	304,578	6,513	30,365	9,421
Public, total .....	420,965	90,759	51,164	8,417	15,699	214,529	4,806	26,181	9,410
Air Force Inst of Tech .....	3,252	1,493	408	60	1,291	0	0	0	0
Bowling Green State U .....	3,430	346	1,147	15	76	871	301	358	316
Cleveland State U .....	9,803	3,843	812	19	6	1,374	89	3,660	0
Kent State University .....	12,075	122	8,136	280	903	682	1,526	416	10
Med Col of Ohio Toledo .....	12,285	0	0	286	118	11,881	0	0	0
Miami University (OH) .....	4,919	139i	1,336i	167i	3i	1,186i	381i	765i	942i
Nrtheastrn OH U Col Med .....	1,362	0	0	0	0	1,362	0	0	0
Ohio State University .....	221,460	44,967	18,645	6,756	9,872	114,193	1,118	19,935	5,974
Ohio University .....	15,452	8,767	1,615	134	78	4,444	102	171	141
University of Akron .....	15,385	4,416	8,770	75	618	1,025	55	426	0
University of Cincinnati .....	92,512	19,746	4,535	278	599	64,906	403	172	1,873
University of Toledo .....	8,441	4,250	3,153	50	107	611	157	113	0
Wright State University .....	20,589	2,670	2,607	297	2,028	11,994	674	165	154
Private, total .....	169,874	65,347	6,971	418	1,187	90,049	1,707	4,184	11
Antioch University .....	131	0	0	0	0	131	0	0	0
Case Western Reserve U .....	124,691	24,957	5,345	292	409	89,427	403	3,858	0
Union Institute .....	0	0	0	0	0	0	0	0	0
University of Dayton .....	45,052	40,390	1,626	126	778	491	1,304	326	11

See explanatory information and SOURCE at end of table.

**Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1993**

[Dollars in thousands]

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State and Institution.	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Oklahoma, total .....	172,968	35,851	15,820	13,958	5,048	79,939	3,298	15,620	3,434
Public, total .....	164,939	30,945	15,287	13,281	4,665	78,753	3,045	15,529	3,434
Oklahoma State University ..	72,920	16,433	7,702	1,360	489	38,176	242	5,084	3,434
University of Oklahoma .....	92,019	14,512	7,585	11,921	4,176	40,577	2,803	10,445	0
Private, total .....	8,029	4,906	533	677	383	1,186	253	91	0
Oral Roberts University .....	140	30	100	0	0	10	0	0	0
University of Tulsa .....	7,889	4,876	433	677	383	1,176	253	91	0
Oregon, total .....	225,750	16,777	22,896	31,774	8,605	133,397	4,076	7,397	828
Public, total .....	207,462	12,722	16,768	28,184	4,090	133,397	4,076	7,397	828
Oregon Health Sciences U ..	56,860	0	0	0	0	54,978	1,882	0	0
Oregon State University .....	114,004	9,801	4,362	25,240	2,360	68,080	147	3,202	812
Portland State University .....	5,860	976	309	1,398	631	474	40	2,016	16
University of Oregon .....	30,738	1,945	12,097	1,546	1,099	9,865	2,007	2,179	0
Private, total .....	18,288	4,055	6,128	3,590	4,515	0	0	0	0
Oregon Grad Inst Sci Tech ..	18,288	4,055	6,128	3,590	4,515	0	0	0	0
Pacific University .....	0	0	0	0	0	0	0	0	0
Pennsylvania, total .....	1,018,803	205,453	68,559	23,774	73,871	554,024	20,610	53,431	19,081
Public, total .....	515,253	127,627	34,111	18,820	7,142	273,744	12,899	27,827	13,083
Indiana U of PA All Cmp .....	333	0	116	14	0	98	38	67	0
Pennsylvania State U .....	282,659	118,454	20,733	18,477	4,495	92,148	5,745	10,551	12,056
Temple University .....	53,686	433	1,103	15	474	36,321	4,906	10,373	61
University of Pittsburgh .....	178,575	8,740	12,159	314	2,173	145,177	2,210	6,836	966
Private, total .....	503,550	77,826	34,448	4,954	66,729	280,280	7,711	25,604	5,998
Bryn Mawr College .....	2,310	0	648	94	317	629	198	424	0
Carnegie Mellon U .....	118,261	26,178	7,323	2,424	56,649	13,916	4,918	5,531	1,322
Drexel University .....	20,314	13,027	1,928	844	932	1,473	0	2,110	0
Duquesne University .....	589	0	221	0	10	349	0	9	0
Hahnemann University .....	17,756	0	0	0	0	17,756	0	0	0
Lehigh University .....	30,869	23,087	4,981	948	635	676	294	248	0
Phila Col Osteopathic Med ..	1,095	0	0	0	0	1,095	0	0	0
Phila Col of Phar & Sci .....	755	0	0	0	0	755	0	0	0
The Medical Col of PA .....	24,996	0	0	0	0	24,996	0	0	0
Thomas Jefferson U .....	51,106	0	0	0	0	51,106	0	0	0
U of Pennsylvania .....	233,829	14,934	19,047	644	8,136	167,039	2,161	17,192	4,676
Villanova University .....	1,670	600	300	0	50	490	140	90	0
Widener U All Campuses .....	0	0	0	0	0	0	0	0	0
Rhode Island, total .....	103,194	14,404	9,483	27,087	9,907	30,688	5,515	5,192	918
Public, total .....	45,942	5,331	1,133	22,227	275	9,978	3,404	2,733	861
U of Rhode Island .....	45,942	5,331	1,133	22,227	275	9,978	3,404	2,733	861
Private, total .....	57,252	9,073	8,350	4,860	9,632	20,710	2,111	2,459	57
Brown University .....	57,152	9,073	8,330	4,858	9,632	20,632	2,111	2,459	57
Providence College .....	100	0	20	2	0	78	0	0	0
South Carolina, total .....	178,174	34,112	11,301	12,951	7,918	95,859	1,716	12,578	1,739
Public, total .....	178,174	34,112	11,301	12,951	7,918	95,859	1,716	12,578	1,739
Clemson University .....	78,569	24,798	4,955	675	3,856	37,009	198	6,636	442
Med U of South Carolina .....	42,543	0	0	0	0	42,543	0	0	0
U of South Carolina .....	57,062	9,314	6,346	12,276	4,062	16,307	1,518	5,942	1,297

See explanatory information and SOURCE at end of table.

**Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1993**

[Dollars in thousands]

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State and Institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
<b>South Dakota, total</b> .....	21,790	2,419	1,064	3,108	2	13,529	111	1,279	278
Public, total .....	21,790	2,419	1,064	3,108	2	13,529	111	1,279	278
SD Sch of Mines & Tech .....	3,744	1,368	55	2,197	0	0	0	0	124
South Dakota State U .....	14,050	1,051	395	897	2	11,113	0	592	0
U of South Dakota .....	3,996	0	614	14	0	2,416	111	687	154
<b>Tennessee, total</b> .....	277,686	49,231	21,956	17,388	10,268	163,188	5,189	8,993	1,473
Public, total .....	172,222	40,640	14,179	16,846	9,720	80,115	3,168	6,093	1,461
East Tennessee State U .....	1,927	0	36	238	0	1,633	0	20	0
Memphis State University .....	11,740	1,548	254	2,773	225	1,650	2,904	1,706	680
Middle Tennessee State U .....	163	0	45	0	16	51	30	21	0
Tennessee State U .....	5,252	816	278	0	53	4,103	0	0	2
Tennessee Tech U .....	9,478	8,028	457	34	15	875	0	69	0
U of Tennessee System .....	143,662	30,248	13,109	13,801	9,411	71,803	234	4,277	779
Private, total .....	105,464	8,591	7,777	542	548	83,073	2,021	2,900	12
Meharry Medical College .....	9,283	0	0	428	0	8,855	0	0	0
Vanderbilt University .....	96,181	8,591	7,777	114	548	74,218	2,021	2,900	12
<b>Texas, total</b> .....	1,387,088	231,169	133,714	114,370	41,091	805,959	12,225	37,345	11,215
Public, total .....	1,172,197	225,005	122,356	109,192	30,891	628,042	9,582	36,444	10,685
East Texas State U .....	206	0	116	0	1	80	7	2	0
Lamar University .....	3,269	682	882	615	139	305	101	78	467
Sam Houston State U .....	1,380	0	260	142	148	155	14	661	0
Stephen F Austin St U .....	1,771	0	118	3	15	1,433	58	144	0
Texas A&M University .....	322,691	77,413	18,015	74,688	4,866	129,639	1,407	12,430	4,233
Texas Tech University .....	38,119	9,927	4,293	1,250	1,130	18,227	78	2,674	540
Texas Woman's University .....	1,380	0	52	0	9	1,297	12	10	0
U North TX Health Sci Ctr .....	5,718	0	0	0	0	5,654	0	0	64
U TX Arlington .....	14,834	9,262	2,650	537	1,129	695	68	238	255
U TX Austin .....	249,158	99,240	64,258	27,457	15,448	20,830	3,364	15,473	3,088
U TX Dallas .....	13,371	840	7,270	1,056	501	2,222	683	799	0
U TX El Paso .....	12,480	3,916	1,272	1,160	1,478	2,586	625	1,443	0
U TX Hlth Sci Ctr Houston .....	58,786	0	0	0	0	58,178	0	608	0
U TX Hlth Sci Ctr San Ant .....	75,239	0	0	0	0	75,239	0	0	0
U TX MD Anderson Cntr Ctr .....	127,475	0	2,824	0	2,653	121,998	0	0	0
U TX Med Br Galveston .....	67,998	0	0	0	0	67,998	0	0	0
U TX SW Med Ctr Dallas .....	114,258	0	0	0	0	114,258	0	0	0
University of North Texas .....	9,026	667	1,486	1,283	1,377	1,520	300	680	1,713
University of Houston .....	55,038	23,058	18,860	1,001	1,997	5,728	2,865	1,204	325
Private, total .....	214,891	6,164	11,358	5,178	10,200	177,917	2,643	901	530
Baylor Col of Dentistry .....	754	0	0	0	0	754	0	0	0
Baylor Col of Medicine .....	172,252	0	0	0	0	172,252	0	0	0
Baylor University .....	1,275	0	873	131	79	95	7	0	90
Rice University .....	30,403	5,293	8,853	2,794	9,386	3,727	314	36	0
Southern Methodist U .....	7,037	857	928	2,223	726	916	111	836	440
Texas Christian U .....	3,170	14	704	30	9	173	2,211	29	0
University of Dallas .....	0	0	0	0	0	0	0	0	0
<b>Utah, total</b> .....	196,113	46,986	17,000	17,330	9,724	91,025	3,189	3,377	7,482
Public, total .....	182,526	40,772	14,660	17,216	9,262	88,319	3,052	1,908	7,337
University of Utah .....	105,263	16,679	9,163	3,672	8,808	65,207	1,346	388	0
Utah State University .....	77,263	24,093	5,497	13,544	454	23,112	1,706	1,520	7,337
Private, total .....	13,587	6,214	2,340	114	462	2,706	137	1,469	145
Brigham Young University .....	13,587	6,214	2,340	114	462	2,706	137	1,469	145

See explanatory information and SOURCE at end of table.

**Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1993**

[Dollars in thousands]

Page 10 of 10

State and Institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Vermont, total .....	49,839	1,318	1,283	59	162	45,726	703	38	550
Public, total .....	49,839	1,318	1,283	59	162	45,726	703	38	550
U of VT & State Agri Col. ....	49,839	1,318	1,283	59	162	45,726	703	38	550
Virginia, total .....	403,212	80,311	35,974	45,742	12,384	207,710	6,320	14,674	97
Public, total .....	380,385	78,515	31,812	45,446	11,629	191,892	6,320	14,674	97
Col of William & Mary .....	21,793	0	3,846	14,944	887	715	257	1,144	0
George Mason University ....	15,830	8,239	1,182	1	2,670	889	550	2,299	0
Old Dominion University .....	11,875	4,519	1,494	3,456	875	1,219	32	280	0
University of Virginia .....	118,019	19,700	13,536	6,611	4,326	66,704	2,823	4,222	97
VA Polytech Inst & St U .....	135,771	45,671	9,249	20,434	2,594	51,095	1,662	5,066	0
Virginia Commonwealth U ...	77,097	386	2,505	0	277	71,270	996	1,663	0
Private, total .....	22,827	1,796	4,162	296	755	15,818	0	0	0
Eastern Virginia Med Sch ....	15,818	0	0	0	0	15,818	0	0	0
Hampton University .....	4,597	200	3,765	136	496	0	0	0	0
Institute of Textile Tech .....	2,412	1,596	397	160	259	0	0	0	0
Washington, total .....	427,763	27,213	23,144	55,513	6,748	274,709	7,070	21,218	12,148
Public, total .....	427,763	27,213	23,144	55,513	6,748	274,709	7,070	21,218	12,148
University of Washington .....	335,329	18,451	18,591	55,031	6,171	216,655	6,778	9,834	3,818
Washington State U .....	92,434	8,762	4,553	482	577	58,054	292	11,384	8,330
West Virginia, total .....	55,021	11,184	2,334	6,571	6,364	25,649	40	2,418	461
Public, total .....	55,021	11,184	2,334	6,571	6,364	25,649	40	2,418	461
Marshall University .....	604	0	6	0	0	588	6	4	0
WV Sch of Osteo Med .....	146	0	0	0	0	146	0	0	0
West Virginia University .....	54,271	11,184	2,328	6,571	6,364	24,915	34	2,414	461
Wisconsin, total .....	444,192	54,970	40,491	26,724	9,477	264,680	11,436	33,671	2,743
Public, total .....	390,607	52,875	39,955	26,724	9,127	214,395	11,235	33,553	2,743
U WI Madison .....	372,362	49,723	36,719	24,004	8,647	212,123	10,749	28,580	1,817
U WI Milwaukee .....	18,245	3,152	3,236	2,720	480	2,272	486	4,973	926
Private, total .....	53,585	2,095	536	0	350	50,285	201	118	0
Marquette University .....	4,896	2,095	536	0	350	1,596	201	118	0
Medical Col of Wisconsin ...	48,689	0	0	0	0	48,689	0	0	0
Wyoming, total .....	32,556	2,208	2,057	7,855	348	16,679	291	266	2,852
Public, total .....	32,556	2,208	2,057	7,855	348	16,679	291	266	2,852
University of Wyoming .....	32,556	2,208	2,057	7,855	348	16,679	291	266	2,852
Puerto Rico, total .....	50,800	3,142	3,303	2,765	472	37,997	196	1,912	1,013
Public, total .....	46,232	3,142	3,303	2,765	472	33,677	196	1,664	1,013
U of PR Rio Piedras .....	5,502	219	1,330	0	179	2,268	196	1,310	0
U of PR Mayaguez .....	23,156	2,923	1,973	2,765	293	13,835	0	354	1,013
U of PR Med Sci Campus ...	17,574	0	0	0	0	17,574	0	0	0
Private, total .....	4,568	0	0	0	0	4,320	0	248	0
Catholic U of PR .....	0	0	0	0	0	0	0	0	0
Ponce School of Medicine ...	2,591	0	0	0	0	2,591	0	0	0
U Ctrl Del Caribe Esc Med ..	1,977	0	0	0	0	1,729	0	248	0

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
Total, all institutions .....	19,911,352	18,794,482	17,576,602	16,283,302	14,974,810	13,462,275	12,152,051	10,926,992
1 Johns Hopkins U <sup>1</sup> .....	745,515	735,542	710,095	668,915	648,395	557,016	510,896	440,844
2 University of Michigan .....	425,868	393,059	363,582	310,578	280,905	250,169	224,890	187,859
3 U WI Madison .....	372,362	352,706	326,489	309,841	285,982	271,418	254,493	231,099
4 MA Institute of Tech <sup>2</sup> .....	365,553	324,453	318,901	311,767	287,157	270,584	264,416	257,726
5 University of Washington .....	335,329	313,514	274,423	245,313	221,712	190,735	187,062	186,572
6 University of Minnesota .....	332,033	317,026	331,471	292,046	258,614	236,115	222,381	201,743
7 Texas A&M University .....	322,691	305,390	288,005	272,800	250,706	231,161	219,853	207,362
8 U CA San Francisco .....	314,599	295,784	268,700	238,278	219,446	193,289	169,436	147,785
9 Cornell University <sup>2</sup> .....	310,949	299,342	309,535	300,144	286,733	271,659	253,971	225,400
10 U CA San Diego .....	307,051	282,114	261,422	237,032	216,991	200,472	183,047	161,054
Total, 1st 10 insts. ....	3,831,950	3,618,930	3,452,623	3,186,714	2,956,641	2,672,618	2,490,445	2,247,444
11 Stanford University .....	306,676	367,980	314,941	299,511	285,994	277,504	240,885	223,162
12 U CA Berkeley <sup>2</sup> .....	284,346	284,545	258,038	231,061	209,967	186,372	175,273	158,990
13 Pennsylvania State U .....	282,659	278,305	267,816	256,926	219,930	188,444	165,841	146,270
14 U CA Los Angeles .....	277,974	270,954	250,033	246,795	227,828	209,338	188,831	168,158
15 Harvard University .....	257,207	253,126	229,939	220,812	209,519	190,429	169,074	154,390
16 University of IL Urbana .....	252,811	251,970	243,380	225,634	210,590	197,393	188,682	158,947
17 U TX Austin .....	249,158	228,545	237,043	228,203	193,337	172,608	168,931	145,324
18 University of Arizona .....	235,528	221,999	213,726	195,633	174,119	155,464	138,726	124,790
19 U of Pennsylvania .....	233,829	222,424	198,221	189,390	173,744	159,218	158,334	152,746
20 U MD College Park .....	229,344	219,041	206,432	166,022	149,510	135,531	126,239	101,650
Total, 1st 20 insts. ....	6,441,482	6,217,819	5,872,192	5,446,701	5,011,179	4,544,919	4,211,261	3,781,871
21 Yale University .....	226,850	211,569	193,893	180,706	171,139	162,188	145,818	136,072
22 U CA Davis .....	223,758	209,282	200,664	198,075	180,297	154,655	143,798	123,788
23 Ohio State University .....	221,460	203,291	194,919	178,569	173,485	154,652	123,246	112,623
24 Columbia U Main Division ....	204,710	199,516	194,666	182,769	172,145	160,976	149,904	145,416
25 Duke University .....	202,434	188,678	164,232	140,708	131,090	113,968	89,556	78,831
26 U of Southern California .....	200,822	194,740	175,595	169,102	162,013	150,009	134,995	116,399
27 University of Colorado .....	193,217	176,266	160,526	154,723	143,720	128,015	112,276	104,576
28 Washington University .....	179,329	170,339	160,464	151,249	128,419	117,829	103,419	90,226
29 U of NC Chapel Hill .....	179,157	161,549	142,681	123,113	122,097	107,039	93,754	85,454
30 University of Pittsburgh .....	178,575	157,250	130,322	117,716	111,265	98,609	84,183	74,059
Total, 1st 30 insts. ....	8,451,794	8,090,299	7,590,154	7,043,431	6,506,849	5,892,859	5,392,210	4,849,315
31 Georgia Institute of Tech <sup>2</sup> .....	175,873	180,263	176,729	168,193	174,664	143,051	120,342	105,457
32 University of Georgia .....	172,274	165,279	162,992	156,742	145,953	137,692	124,442	111,745
33 Baylor Col of Medicine .....	172,252	167,998	161,084	155,122	134,681	106,814	90,179	68,993
34 University of Rochester <sup>2</sup> .....	161,810	139,992	131,777	129,011	123,997	114,061	101,598	95,824
35 Rutgers the State U NJ .....	161,025	162,089	151,335	137,985	124,574	105,150	94,555	79,894
36 Louisiana State U System ....	158,823	151,844	147,626	135,849	122,357	114,698	102,070	91,709
37 NC State U Raleigh .....	155,624	143,008	142,606	131,133	123,441	110,286	102,647	92,695
38 Northwestern University .....	154,227	141,975	144,809	133,151	118,991	102,755	88,920	80,178
39 Michigan State University ....	150,861	142,308	133,249	126,987	121,456	116,320	111,810	100,861
40 Purdue University .....	149,032	140,260	136,325	130,379	124,323	118,797	107,131	102,126
Total, 1st 40 insts. ....	10,063,595	9,625,315	9,078,686	8,447,983	7,821,286	7,062,483	6,435,904	5,778,797
41 U of Iowa .....	148,811	135,418	124,058	115,778	105,900	94,552	79,090	73,596
42 Iowa St U of Sci & Tech <sup>2</sup> .....	148,459	132,580	134,657	116,270	103,241	86,726	78,351	72,642
43 U of Tennessee System .....	143,662	131,240	128,418	116,644	113,187	104,179	91,417	80,156
44 University of Florida .....	142,966	140,189	140,257	139,678	125,770	107,177	104,245	95,527
45 VA Polytech Inst & St U .....	135,771	130,994	125,256	121,423	104,266	89,955	80,552	75,450
46 U of Alabama Birmingham ....	133,790	117,844	113,317	110,603	100,666	85,030	72,692	59,401
47 University of Connecticut .....	133,054	124,010	123,794	117,932	109,328	89,630	81,575	74,287
48 New York University .....	129,774	122,399	112,106	108,511	104,451	100,872	98,924	92,787
49 SUNY Buffalo .....	128,203	128,428	113,441	109,190	100,291	87,635	70,474	64,404
50 Indiana University .....	127,877	117,565	102,461	89,191	81,793	73,526	65,341	59,160
Total, 1st 50 insts. ....	11,435,962	10,905,982	10,296,451	9,593,203	8,870,179	7,981,765	7,258,565	6,526,207

See explanatory information and SOURCE at end of table.

**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
51 U TX MD Anderson Cntr Ctr	127,475	112,121	108,988	91,283	85,903	75,642	65,417	63,318
52 Case Western Reserve U	124,691	118,391	104,199	93,384	86,168	77,303	70,850	57,530e
53 University of Miami	120,875	104,165	96,979	94,344	90,298	70,783	65,158	64,154
54 Emory University	120,125	101,398	91,940	82,774	64,713	60,896	58,889	51,115
55 Carnegie Mellon U <sup>2</sup>	118,261	110,571	103,030	100,201	101,635	94,051	83,763	71,920
56 University of Virginia	118,019	110,103	96,733	96,815	81,281	74,572	63,861	57,472
57 California Inst of Tech <sup>2</sup>	115,439	111,733	115,526	105,730	98,731	92,530	86,565	78,776
58 Colorado State University	115,385	107,339	80,474	73,967	64,351	59,369	52,619	49,359
59 U TX SW Med Ctr Dallas	114,258	102,263	94,511	85,919	79,920	70,392	62,907	52,619
60 Oregon State University	114,004	107,573	96,199	90,688	91,355	88,953	82,786	78,168
Total, 1st 60 insts.	12,624,494	11,991,639	11,285,030	10,508,308	9,714,534	8,746,256	7,951,380	7,150,638
61 University of Chicago <sup>2</sup>	111,877	118,123	113,289	117,955	109,429	98,541	91,879	88,026
62 U MD Baltimore Prof Sch	111,772	100,312	100,163	83,689	75,854	68,787	57,931	36,934
63 SUNY Stony Brook	107,817	98,906	90,790	82,236	79,455	79,410	54,850	54,197
64 U of Missouri Columbia	106,193	97,242	96,748	88,181	74,055	66,365	61,212	57,653
65 University of IL Chicago	105,552	102,267	90,520	85,268	83,329	75,922	64,701	54,846
66 University of Utah	105,263	108,486	94,621	89,018	83,340	75,789	68,194	60,478
67 University of Kentucky	102,911	92,244	81,137	74,959	69,532	69,003	55,042	53,770
68 U CA Irvine	100,631	89,275	82,523	78,074	66,806	60,100	51,691	49,979
69 Princeton University <sup>2</sup>	98,603	93,958	92,002	91,514	82,914	76,891	65,089	51,789
70 Vanderbilt University	96,181	95,447	80,759	75,062	65,218	60,591	43,589	37,715
Total, 1st 70 insts.	13,671,294	12,987,899	12,207,582	11,374,264	10,504,466	9,477,655	8,565,558	7,696,025
71 U of Nebraska Lincoln	94,959	91,427	87,529	77,598	68,281	60,788	56,066	55,158
72 University of Cincinnati	92,512	90,279	80,598	74,461	69,831	60,479	53,804	44,368
73 Washington State U	92,434	85,080	75,244	66,856	55,173	51,319	48,865	46,392
74 University of Oklahoma	92,019	92,146	79,777	58,645	53,956	50,047	45,350	37,328
75 Boston University	91,158	83,701	74,881	73,651	66,325	61,505	58,299	53,225
76 Yeshiva University	89,636	87,196	86,721	83,968	74,496	75,383	73,773	70,260
77 New Mexico State U	85,974	83,900	78,736	71,288	60,930	61,001	58,672	51,917
78 Wayne State University	85,627	81,127	69,997	62,455	59,521	50,509	39,335	33,589
79 University of Kansas	85,134	75,004	65,982	61,144	57,111	51,723	50,603	47,853
80 Woods Hole Ocngrphc Inst	81,519	82,845	76,979e	71,747	74,881	58,700	48,061	43,675
Total, 1st 80 insts.	14,562,266	13,840,604	12,984,026	12,076,077	11,144,971	10,059,109	9,098,386	8,179,790
81 Clemson University	78,569	77,579	70,236	66,664	56,699	49,375	46,495	38,963
82 Utah State University	77,263	89,776	94,167	86,450	69,944	59,273	41,343	42,351
83 Virginia Commonwealth U	77,097	69,189	65,608	62,730	52,193	42,951	42,329	38,729
84 University of New Mexico	76,736	72,863	67,344	57,728	52,970	47,729e	49,764e	49,856
85 U Med & Dent NJ	76,410	84,505	80,787	71,789	54,451	42,027	32,222	30,322
86 Tulane University	75,634	72,190	71,781	56,407	45,195	42,619	38,393	34,871
87 CUNY Mt Sinai Sch of Med	75,337	75,561	66,310	63,752	56,856	49,727	46,137	40,193
88 U of South Florida	75,322	68,713	72,948	76,404	60,973	40,396	38,633	11,707
89 U TX Hlth Sci Ctr San Ant	75,239	65,179	51,768	45,663	42,501	39,673	34,476	33,165
90 Rockefeller University	74,396	75,102	74,090	75,245	73,945	68,588	66,760	63,216
Total, 1st 90 insts.	15,324,269	14,591,261	13,699,065	12,738,909	11,710,698	10,541,467	9,534,938	8,563,163
91 University Hawaii Manoa	73,961	80,258	78,166	76,525	70,733	64,278	57,345	57,383
92 Georgetown University	73,785	64,937	60,454	50,867	53,597	44,783	35,981	29,254
93 Oklahoma State University	72,920	71,238	67,492	65,685	53,655	56,636	47,420	45,919
94 Mississippi State U	70,300	65,754	64,335	58,492	53,670	45,005	40,405	43,813
95 U CA Santa Barbara	68,775	66,007	59,593	59,750	50,067	46,598	42,704	36,516
96 Auburn University	68,151	66,773	69,913	66,795	53,814	52,737	48,045	47,930
97 U TX Med Br Galveston	67,998	57,672	45,086	40,610	38,717	33,047	24,351	23,312i
98 U of Alaska Fairbanks	66,796	67,881	67,432	65,571	56,701	49,856e	47,432i	45,008i
99 Arizona State University	66,142	69,346	63,489	59,849	44,347	39,510	38,763	33,580
100 U MA Amherst	64,111	62,990	--	--	--	--	--	--
Total, 1st 100 insts.	16,017,208	15,264,117	14,275,025	13,283,053	12,185,999	10,973,917	9,917,384	8,925,878

See explanatory information and SOURCE at end of table.

**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
101 Florida State University .....	62,929	50,178	53,811	62,933	55,245	50,679	46,420	44,179
102 KS St U Agri & App Sci .....	62,562	57,723	53,010	50,311	47,302	43,174	40,587	40,708
103 Dartmouth College .....	59,920	53,668	49,384	43,737	38,452	35,563	31,227	26,067i
104 U CA Riverside .....	59,065	57,536	57,244	54,892	53,213	52,983	51,158	47,881
105 U TX Hlth Sci Ctr Houston ...	58,786	55,262	53,896	45,707	46,860	43,345	35,158	32,564
106 U Arkansas Fayetteville .....	58,325	44,768	40,831	36,963	32,842	28,104	27,435	28,566
107 Wake Forest University .....	57,646	49,919	44,214	39,654	37,156	30,568	23,596	20,705i
108 Brown University .....	57,152	55,585	49,503	46,763	43,564	41,556	38,110	31,906
109 U of South Carolina .....	57,062	54,360	55,091	47,477	40,421	31,836	29,658	28,362
110 Tufts University .....	56,976	50,633	47,748	47,009	50,424	54,225	46,497	40,789i
Total, 1st 110 insts. ....	16,607,631	15,793,749	14,779,757	13,758,499	12,631,478	11,385,950	10,287,230	9,267,605
111 Oregon Health Sciences U ..	56,860	49,313	41,661	41,420	35,097	29,509	26,062	21,418
112 University of Houston .....	55,038	44,957	42,292	37,978	34,229	26,803	24,378	22,053
113 U MA Worcester .....	54,277	53,342	--	--	--	--	--	--
114 West Virginia University .....	54,271	52,482	49,686	46,624	37,569	28,807	25,676	23,376
115 Temple University .....	53,686	53,921	54,921	49,449	45,482	40,941	36,013	32,610
116 University of Delaware .....	52,627	48,970	44,696	40,119	37,194	32,023	31,681	28,798
117 Thomas Jefferson U .....	51,106	41,329	33,066	30,969	29,405	24,231	20,357	12,402
118 U of VT & State Agri Col .....	49,839	49,542	46,541	45,162	42,743	36,815	31,547	29,699
119 Medical Col of Wisconsin .....	48,689	43,579	40,446	34,622	34,951	33,231	30,218	21,356
120 U of Rhode Island .....	45,942	40,842e	38,842	35,846	36,219e	35,940	27,369	27,805i
Total, 1st 120 insts. ....	17,129,966	16,272,026	15,171,908	14,120,688	12,964,367	11,674,250	10,540,531	9,487,122
121 University of Dayton .....	45,052	41,009	37,925	36,177	31,984	31,483	30,105	27,478
122 University of Idaho .....	44,655	44,140	39,407	34,936	31,879	30,078	24,070	23,068
123 Rensselaer Polytech Inst .....	44,132	50,769	50,106	46,880	38,805	36,511	25,176	21,233
124 Med U of South Carolina .....	42,543	31,900	25,877	23,128	23,017	20,949	19,658	19,278
125 George Washington U .....	41,177	39,335	29,791	32,372	30,284	23,522	24,320	20,927i
126 U of New Hampshire .....	39,555	33,744	29,591	25,994	23,720	22,095	19,701	18,263
127 U of Nevada Reno .....	38,564	37,546	29,303	21,449	18,141	17,867	15,171	13,114i
128 Texas Tech University .....	38,119	36,869	34,994	34,124	33,926	29,374	28,390	25,326
129 U CA Santa Cruz .....	37,886	36,413	31,620	26,347	23,651	22,163	22,222	17,818
130 SUNY Albany .....	37,860	35,856	20,580	22,034	24,240	19,625	18,815	16,433
Total, 1st 130 insts. ....	17,539,509	16,659,607	15,501,102	14,424,129	13,244,014	11,927,917	10,768,159	9,690,060
131 Brandeis University .....	36,213	35,229	33,837	30,881	30,596	26,618	23,811i	21,006i
132 North Dakota State U .....	34,971	34,466	31,935	12,468	10,433	8,638	19,508	17,537
133 U of Alabama Huntsville .....	34,153	32,017	28,897	29,565	26,186	18,628	11,158	7,284
134 Rush University .....	34,039	26,184	27,359	21,284	21,741	19,827	16,342	13,969
135 U of Central Florida .....	33,922	27,629	41,935	30,618	30,991	11,307	9,571i	7,835e
136 Montana State University .....	32,911	34,419	30,278	27,648	25,968	25,227	23,093i	20,960
137 University of Wyoming .....	32,556	30,181	23,009	22,831	23,310	20,429	17,316	18,663
138 San Diego St University .....	32,493	30,683	28,570	22,524	20,124	19,370	16,973	9,958
139 Syracuse University .....	32,443	32,145	30,606	33,811	35,543	33,643	30,348	27,289
140 U of NE Med Ctr Omaha .....	31,669	31,564	27,858	17,844	17,291	14,684	12,492	11,759
Total, 1st 140 insts. ....	17,874,879	16,974,124	15,805,386	14,673,603	13,486,197	12,126,288	10,948,771	9,846,320
141 Lehigh University .....	30,869	31,822	27,912	27,255	26,004	27,089	24,893	20,294
142 Unif Svcs U of Hlth Sci .....	30,846	27,875i	24,904i	21,933i	18,962i	15,991	12,076	12,960
143 University of Oregon .....	30,738	30,242	26,151	26,346	22,476	18,567	16,815	16,202
144 Rice University .....	30,403	29,424	30,577	26,267	21,563	18,851	17,298i	15,747i
145 Loyola U of Chicago .....	29,232	30,099	22,702	12,260	11,303	8,327	7,123	6,375
146 SUNY Hlth Sci Ctr Brklyn .....	27,645	24,171	32,824	22,873	20,523	18,374	17,008	15,557i
147 Sthrn IL U Carbondale .....	26,376	28,094	28,340	25,873	23,357	20,310	18,654	18,814
148 The Medical Col of PA .....	24,996	25,835	24,645	18,643	20,542	15,277	11,081	9,775i
149 Medical Col of Georgia .....	24,935	21,426	12,082	12,052	11,363	9,925	10,053	9,323
150 U of Maine Orono .....	24,879	23,213	27,082	23,605	19,974	17,341	16,952	19,315
Total, 1st 150 insts. ....	18,155,798	17,246,325	16,062,605	14,890,710	13,682,264	12,296,340	11,100,724	9,990,682

See explanatory information and SOURCE at end of table.

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**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
151 US Naval Postgrad School ..	24,296	20,412	19,397	17,391	15,306	15,515	13,053	13,216
152 NM Inst Mining & Tech .....	24,040	25,208	24,059i	22,911	22,289	20,357	23,709	16,796
153 NJ Inst of Technology .....	23,781	21,126	16,463	15,225	11,402	8,327	10,418	8,579
154 University of Notre Dame .....	23,745	22,679	21,302	19,373	19,385	17,845	14,409	13,581
155 University of Mississippi .....	23,734	23,361	24,748	22,071	17,092	15,125	13,377	12,970
156 U of PR Mayaguez .....	23,156	25,238	27,897i	30,555	29,343	27,091	24,491	22,728i
157 The University of Alabama ..	23,149	22,573	21,248	21,488	18,395	15,836	13,362	11,221
158 Florida A&M University .....	22,777	22,230	18,552	15,847	14,171	12,079	9,364	8,401i
159 SUNY Col Env Sci & Frstry ..	21,856	18,456	19,049	18,671	17,221	12,917	11,690	11,249i
160 Col of William & Mary .....	21,793	18,890	18,508	17,792	15,394	8,031	6,694	5,923
Total, 1st 160 insts. ....	18,388,125	17,466,498	16,273,828	15,092,034	13,862,262	12,449,463	11,241,291	10,115,346
161 Desert Research Institute ....	21,187	20,579	17,948	16,852	16,005	14,798	12,899	11,421
162 San Jose State University ....	21,005	18,326	12,100	10,086	9,488	10,104	9,351i	8,598i
163 St Louis University .....	20,826	19,932	19,183	17,157	14,251	9,700	9,190i	8,684i
164 Wright State University .....	20,589	17,401	14,646	13,451	11,043	9,551	7,260	9,374
165 CUNY City College .....	20,401	16,454	15,451	12,973	11,724	10,392	9,079	8,393i
166 Drexel University .....	20,314	23,184	19,705	20,079	17,983	16,045	15,803	14,247
167 University of Louisville .....	19,496	17,400	16,852	15,921	14,466	22,945	22,966	14,782
168 U of Nevada Las Vegas .....	19,373	13,300	19,491	15,449i	11,409i	7,369	6,184i	5,000i
169 University North Dakota .....	19,204	18,265	16,995	17,498	17,518	15,806	16,404	14,303i
170 U MD Center for EES .....	19,055	18,557	16,205	15,652	13,741	12,682	12,029	9,742
Total, 1st 170 insts. ....	18,589,575	17,649,896	16,442,404	15,247,152	13,999,890	12,578,855	11,362,456	10,219,890
171 Michigan Tech University ....	18,696	18,179	19,667	16,037	15,186	14,321	12,656	12,386
172 Northeastern University .....	18,517	15,876	15,973	14,347	13,302	11,894	10,124	9,243
173 New York Medical College ....	18,491	16,799	14,633	13,244	12,958	13,817	11,794	9,327
174 Howard University .....	18,427	17,576	15,731	17,382	17,125i	16,870i	16,615	16,305
175 Oregon Grad Inst Sci Tech ..	18,288	12,332	11,160	9,262	8,825	8,470	6,926	6,109i
176 U WI Milwaukee .....	18,245	18,567	16,865	15,639	13,428	12,424	11,079	10,383
177 U of Missouri Rolla .....	18,025	15,619	14,432	14,285	17,692	18,823	14,712	14,027
178 Hahnemann University .....	17,756	18,203	13,169	13,595	11,158	8,551	9,062	10,694
179 U of PR Med Sci Campus ....	17,574	18,296	11,014	6,293	6,528	5,517	6,893	6,397i
180 George Mason University ....	15,830	11,930	9,726	8,011	4,220	3,834	2,368e	1,755i
Total, 1st 180 insts. ....	18,769,424	17,813,273	16,584,774	15,375,247	14,120,312	12,693,376	11,464,685	10,316,516
181 Eastern Virginia Med Sch ....	15,818	11,238	11,112	10,496	8,125	6,614	4,320	3,441i
182 U Arkansas Med Sci .....	15,686	15,889	14,250	11,898	10,834	9,851	8,094	6,813
183 Ohio University .....	15,452	14,811	12,796	12,982	11,461	10,863	8,548	8,091
184 University of Akron .....	15,385	14,825	13,405	10,372	9,728	7,114	7,190	5,360
185 University of Montana .....	15,169	10,177	7,871	7,332	6,482	6,842	6,332	5,478i
186 U TX Arlington .....	14,834	13,896	12,887	5,729	7,064	7,670	5,760	4,950
187 Western Illinois U .....	14,448	11,800i	9,155i	6,510i	3,865i	1,220	1,135i	1,054i
188 U MA Lowell .....	14,292	14,880	12,403	11,291	11,242	10,903	8,364	8,453
189 South Dakota State U .....	14,050	12,692	11,511	9,511	8,472	8,622	8,279	7,882
190 Stevens Institute Tech .....	14,004	14,580	8,303	6,146	4,973	6,426	8,915	7,660i
Total, 1st 190 insts. ....	18,918,562	17,948,061	16,698,467	15,467,514	14,202,558	12,769,501	11,531,622	10,375,698
191 Mercer University .....	13,771	10,354	8,172	4,656	3,043	931	620	428
192 SUNY Binghamton .....	13,760	12,843	9,870	10,680	9,270	8,926	8,541	8,322
193 Colorado School of Mines ....	13,644	12,783	12,971	10,943	9,364	8,832	8,515	7,807
194 Brigham Young University ....	13,587	14,469	12,682	11,608	11,544	10,967	11,341	10,086i
195 SUNY Hlth Sci Ctr Syracuse ..	13,514	13,896	14,564	14,401	31,125	24,541	21,186	18,065
196 U TX Dallas .....	13,371	12,995	10,571	12,075	11,265	10,936	10,677	7,947
197 U of South Alabama .....	12,650	12,277	12,924	11,105	10,503	8,578	7,668	7,574
198 U TX El Paso .....	12,480	10,147	9,447	6,889	4,168	2,641	2,605	1,933
199 Med Col of Ohio Toledo .....	12,285	10,905	9,353	7,159	6,809	5,495	7,652	7,267i
200 Georgia State University .....	12,133	10,026	9,271	8,942	7,000	5,843	5,258	2,900
Total, 1st 200 insts. ....	19,049,757	18,068,756	16,808,292	15,565,972	14,306,649	12,857,191	11,615,685	10,448,027

See explanatory information and SOURCE at end of table.

**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

Page 5 of 14

Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
201 NC A&T State University .....	12,090	11,914	10,427	8,657	6,706	6,401	4,461	5,754
202 Kent State University .....	12,075	11,655	8,469	7,172	5,534	5,086	4,573	3,662
203 Clark Atlanta University .....	12,057	11,483	8,655	7,896i	7,137i	6,378i	5,619i	4,860i
204 Old Dominion University .....	11,875	10,859	10,040	10,478	9,107	7,252	6,572	5,934i
205 Albany Medical College .....	11,845	9,681	10,131	9,431	9,827	11,694	13,287	12,869i
206 Memphis State University ....	11,740	12,169	12,000	12,073	9,892	8,201	7,132	5,315
207 Worcester Polytech Inst .....	11,484	8,925	5,889	4,683	4,208	3,814	3,562	3,708i
208 Florida International U .....	11,443	--	--	--	--	--	--	--
209 Florida Atlantic U .....	11,331	8,021	5,600	4,985	3,469	3,045	2,665	2,059
210 U of Southwestern LA .....	11,319	10,815	10,232	8,319	6,817	5,092	5,017	4,695i
Total, 1st 210 insts. ....	19,167,016	18,164,278	16,889,735	15,639,666	14,369,346	12,914,154	11,668,573	10,496,883
211 Northern Illinois U .....	11,215	10,708	10,074	8,930	7,304	5,905	4,899	5,042
212 U of Missouri Kansas City ....	10,976	9,889	8,300	8,310	7,926	7,630	4,790	3,837
213 Boston College .....	10,731	10,400	9,810	8,052	6,152	6,137	5,099	4,926i
214 Clarkson University .....	10,586	9,518	9,125	8,392	7,523	7,804	7,442	6,975
215 CUNY Hunter College .....	10,381	8,939	8,075	6,928	6,526	6,437	6,943	5,858
216 Cleveland State U .....	9,803	10,939	10,205	8,699	7,570	7,334	6,897	4,528
217 U MA Boston .....	9,745	7,974	--	--	--	--	--	--
218 Tennessee Tech U .....	9,478	9,872	9,888	9,631	7,539	7,483	6,970	4,883i
219 Polytechnic University .....	9,424	9,273	9,272	10,919	11,345	9,378	9,400	7,779
220 Alabama A&M University .....	9,316	7,053	6,699	7,010	6,272	6,140	4,534	3,986i
Total, 1st 220 insts. ....	19,288,671	18,258,843	16,971,183	15,716,537	14,437,503	12,978,402	11,725,547	10,544,697
221 Meharry Medical College .....	9,283	7,258	7,249	6,663	6,564	5,228	4,797	4,137i
222 Creighton University .....	9,109	8,047	8,324	8,929	7,934	7,650	5,910i	4,171i
223 Northern Arizona U .....	9,051	8,388	6,913	5,902	5,368	4,204	3,774	2,308
224 Loma Linda University .....	9,030	8,028	6,191	7,547	5,248	6,496	7,469	5,959i
225 Univeristy of North Texas .....	9,026	10,701	10,580	9,741	9,121	7,038	5,724	4,789
226 Western Michigan U .....	8,630	6,199	6,011	4,257	3,103i	1,949	1,267	1,600
227 University of Denver .....	8,595	8,284	6,484	10,102	8,938	10,038	12,239	13,957
228 University of Toledo .....	8,441	7,287	6,743	5,551	4,599	3,843	2,950i	2,058
229 Inst Paper Sci and Tech .....	8,344	7,474	7,887	5,761	6,231	5,782	5,777	5,208
230 Illinois Inst of Tech .....	8,252	6,293	7,128	6,793	6,864	7,545	8,470	5,715
Total, 1st 230 insts. ....	19,356,432	18,336,802	17,044,693	15,787,783	14,501,473	13,038,175	11,783,924	10,594,599
231 Catholic U of America .....	7,926	7,346	7,365	7,398	6,554	5,759	5,268	3,964
232 University of Tulsa .....	7,889	5,961	5,318	4,325	3,329	3,333	2,852i	2,371i
233 U MD Baltimore County .....	7,544	7,619	6,809	5,385	4,342	3,975	3,222	2,887
234 Morehouse School of Med ...	7,448	7,106	6,291	5,891	4,320	2,222	0i	0i
235 East Carolina University .....	7,360	6,067	6,119	6,098	5,241	4,679	3,771	3,858
236 U Southern Mississippi .....	7,334	5,375	7,388	4,666	4,413	3,517	3,840	2,440
237 Southern Methodist U .....	7,037	7,722	8,607	13,600e	9,363	6,814	4,938	4,459i
238 Finch U Hlth Sci Chicago .....	6,928	5,899	4,908	4,695	4,535	4,369	3,866	3,677
239 C R Drew U of Med & Sci .....	6,852	7,862	7,043	4,970i	2,898	2,826	2,913	1,942i
240 Southern U All Campuses .....	6,837	6,813	5,942	5,278i	4,615	3,451	2,196	2,845
Total, 1st 240 insts. ....	19,429,587	18,404,572	17,110,483	15,850,089	14,551,083	13,079,120	11,816,790	10,623,042
241 CA St U Northridge .....	6,583	--	--	--	--	--	--	--
242 Wichita State University .....	6,407	6,285	5,182	3,196	3,443	4,758	2,741	2,018
243 Rochester Inst of Tech .....	6,331	5,343i	4,357i	3,371i	2,385i	1,399	1,149i	903i
244 U of the Virgin Islands .....	6,189	5,753i	5,318i	4,883e	4,734	4,666	2,386e	1,760
245 Oakland University .....	6,096	5,804	5,912	4,102	4,673	3,132	4,500	4,016i
246 Prairie View A&M U .....	5,931	6,098	3,623	3,521	3,680	1,741e	1,498	2,015i
247 Florida Inst of Tech .....	5,866	5,924	6,305	7,003	3,531	2,505	1,918	1,886
248 Portland State University .....	5,860	4,433	4,169	3,834	3,374	2,810	2,737	2,298i
249 U of Houston Clear Lake .....	5,801	5,422i	5,046i	4,670i	4,294i	3,918	3,183i	2,450i
250 United States Naval Acad ....	5,720	5,034i	4,351i	3,668i	2,985i	2,302	2,249i	2,196i
Total, 1st 250 insts. ....	19,490,371	18,454,668	17,154,746	15,888,337	14,584,182	13,106,351	11,839,151	10,642,584

See explanatory information and SOURCE at end of table.

**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
251 U North TX Health Sci Ctr .....	5,718	3,920	3,504	2,767	3,630	4,461	3,560	3,247
252 U of NC Wilmington .....	5,701	--	--	--	--	--	--	--
253 U of PR Rio Piedras .....	5,502	4,518	5,058	5,374	4,017	4,741	4,175	3,904 i
254 Tuskegee University .....	5,500	4,800	4,426	5,089	5,348	3,752	2,752	1,787 i
255 San Francisco State U .....	5,459	4,728 i	3,997 i	3,266 i	2,535 i	1,804 e	1,931	2,011
256 Tennessee State U .....	5,252	4,475	3,709	3,300	3,442	3,408	2,719	2,661
257 U of NC Charlotte .....	5,036	4,724	3,220	3,152	2,014	2,085	1,870 i	1,656 i
258 Miami University (OH) .....	4,919	3,972	3,087	2,203	2,364	2,194 i	2,024 i	1,854 i
259 Marquette University .....	4,896	4,256	3,821	3,262	2,454	2,411	1,621	1,559
260 Wesleyan University .....	4,804	4,095	3,248	4,021	3,943	3,140	3,397	2,456
Total, 1st 260 insts. ....	19,543,158	18,494,156	17,188,816	15,920,771	14,613,929	13,134,347	11,863,200	10,663,719
261 Virginia State University .....	4,801	6,075	5,795	3,258	2,620	2,476	2,356 i	2,236 i
262 U of Missouri St Louis .....	4,681	4,304	2,468	2,291	2,439	2,218	1,824	1,950
263 Hampton University .....	4,597	3,272	3,345	2,307	2,168	--	--	--
264 Illinois State University .....	4,535	3,294	2,898	2,951	2,559	2,578	2,296	1,758
265 CA St U Long Beach .....	4,507 e	4,507 i	4,507 i	4,507 i	4,507 i	4,507	3,822 i	3,137 i
266 Alfred University .....	4,479	4,117	3,911	4,067	3,874	3,829	2,591	1,929
267 Jackson State University .....	4,371	4,065	3,912	3,762	3,747	3,403	2,260	2,076 i
268 CA Poly St U San Luis Ob .....	4,352	3,079	3,258	3,118	3,182	1,795	1,615 i	1,437 i
269 Texas Southern U .....	4,220	2,329	2,101	1,546	1,519	1,703	1,491 i	1,279 i
270 Idaho State University .....	4,119	2,756	2,030	1,634	1,312	711	709	661
Total, 1st 270 insts. ....	19,587,820	18,531,954	17,223,041	15,950,212	14,641,856	13,157,567	11,882,164	10,680,182
271 South Carolina State Col .....	4,103	3,665	2,526	2,593	1,694 i	796	878 i	955 i
272 U of South Dakota .....	3,996	1,851	1,598	1,831	1,381	1,287	1,200 i	1,113 i
273 American University .....	3,903	4,330	5,057	4,127	3,765	3,917	3,286	2,720 i
274 Texas A&M U Kingsville .....	3,863	2,937	2,674	2,558	2,941	2,470	2,288 i	2,109 i
275 CA St U Fresno .....	3,835	3,388 i	2,941 i	2,494 i	2,047 i	1,600	1,433 i	1,267 i
276 SD Sch of Mines & Tech .....	3,744	3,693	2,850	3,000	2,596	2,418	1,916	1,978
277 Albany State College .....	3,733	2,339	1,172	1,173	1,725	366	263	207 i
278 Louisiana Tech University .....	3,582	3,985	2,759	3,894	3,930	2,828	2,775	2,610 i
279 Gallaudet University .....	3,535	3,308 i	3,081 i	2,854 i	2,627 i	2,400	2,367 i	2,334 i
280 CA St U Los Angeles .....	3,523	3,274 i	3,028 i	2,782 i	2,536 i	2,290	2,085 i	1,883 i
Total, 1st 280 insts. ....	19,625,637	18,564,724	17,250,727	15,977,518	14,667,098	13,177,939	11,900,655	10,697,358
281 Southwest Texas St U .....	3,487	2,788 i	2,091 i	1,394 i	697 i	0	93 i	184 i
282 Bowling Green State U .....	3,430	3,430	3,729	3,400	3,353	3,142	2,439	2,018
283 U TX San Antonio .....	3,286	--	--	--	--	--	--	--
284 Lamar University .....	3,269	2,964	2,898	2,121	779	202	417	330
285 Air Force Inst of Tech .....	3,252	3,813	2,243	2,200	1,800 i	1,400	456	370 i
286 U Arkansas Pine Bluff .....	3,247	2,372	2,419	1,188	1,148	1,199	1,047	1,010
287 University of DC .....	3,208 i	2,900	2,865	2,569	2,271 i	1,973	1,485	2,371
288 Texas Christian U .....	3,170	3,128	2,859	1,823	888	737	912	1,124
289 Xavier University of LA .....	3,169	2,379	2,424	1,902	1,294	--	--	--
290 Alcorn State University .....	3,129	2,517	2,041	1,935	1,850	1,692 e	1,623 i	1,554 i
Total, 1st 290 insts. ....	19,658,284	18,591,015	17,274,296	15,996,050	14,681,178	13,188,284	11,909,127	10,706,319
291 CUNY Grad Sch & U Ctr .....	3,125	3,185	2,554	3,858	3,069	2,189	2,336	2,569
292 University of Guam .....	3,108 e	3,056 i	3,009 i	2,962 i	2,915 i	2,868 i	2,821 i	2,774 i
293 U MD Eastern Shore .....	3,045	3,640	1,620	1,850	2,944	1,736	1,522	1,615
294 Lincoln University .....	2,958	3,194	3,027	2,771	2,901	--	--	--
295 Tarleton State University .....	2,839	1,396	998	309	38	44	44	53 i
296 Fort Valley State College .....	2,749	2,711	2,370	2,313	2,173	--	--	--
297 Forest Inst of Prof Psy .....	2,717	--	--	--	--	--	--	--
298 CUNY Queens College .....	2,649	2,328	2,518	2,551	2,301	2,204	2,086 i	1,971 i
299 Northeast Louisiana U .....	2,644	2,401	904	1,138	439	386	308	315
300 CA St Poly U Pomona .....	2,621	1,784	1,584	1,320	1,314	1,626	1,340 i	1,058 i
Total, 1st 300 insts. ....	19,686,739	18,614,710	17,292,880	16,015,122	14,699,272	13,199,337	11,919,584	10,716,674

See explanatory information and SOURCE at end of table.

**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
301 Ponce School of Medicine ...	2,591	1,715	1,372	943	856	663	657	715
302 Eastern Washington U .....	2,445	2,646	2,289	1,811	1,615	1,333	1,384	1,098
303 Southwest Missouri St U .....	2,415	2,269i	2,127i	1,985i	1,843i	1,701	1,531i	1,362i
304 Institute of Textile Tech .....	2,412	2,281	2,148	1,921	1,311	1,678	1,238	1,172i
305 U of NC Greensboro .....	2,360	2,128	1,989	1,154	823	455	495	386
306 Kentucky State University .....	2,349	2,525	2,026	2,856	1,721	1,697	1,856	1,656i
307 MT Col of Min Sci & Tech .....	2,340	2,087i	1,837i	1,587i	1,337i	1,087	1,101i	1,113i
308 U MA Dartmouth .....	2,340	1,941	--	--	--	--	--	--
309 Clark University .....	2,311	1,694	1,314	1,281	1,256	1,111	1,058	1,335i
310 Bryn Mawr College .....	2,310	1,746	2,490	1,854	895	817	807	565
Total, 1st 310 insts. ....	19,710,612	18,635,742	17,310,472	16,030,514	14,710,929	13,209,879	11,929,711	10,726,076
311 Occidental College .....	2,220	1,722	1,570	1,627	2,011	1,535	1,482i	1,431i
312 CUNY Brooklyn College .....	2,181	2,311i	2,437i	2,563i	2,689i	2,815	2,634i	2,460i
313 CA St U Chico .....	2,158	1,826i	1,494i	1,162i	830i	498	976	696
314 Embry Riddle Aeronautcl U ..	2,124	--	--	--	--	--	--	--
315 U of Detroit Mercy .....	2,069	1,731	1,450	1,526	1,282	805	798i	795i
316 Humboldt St University .....	2,033e	2,033i	2,033i	2,033i	2,033i	2,033	1,716i	1,402i
317 U WI Superior .....	1,988	1,881	1,707	1,704	1,745	1,553	1,659	1,412
318 U Ctr'l Del Caribe Esc Med ...	1,977	1,294	852	620	682	540	577	819
319 US Air Force Academy .....	1,956	1,564i	1,173i	782i	391i	0	0	0
320 Harvey Mudd College .....	1,944	2,000i	2,055i	2,110i	2,165i	2,220	1,888	1,660
Total, 1st 320 insts. ....	19,731,262	18,652,104	17,325,243	16,044,641	14,724,757	13,221,878	11,941,441	10,736,751
321 Sthrn IL U Edwardsville .....	1,937	1,704i	1,474i	1,244i	1,014i	784	693i	606i
322 East Tennessee State U .....	1,927	1,750	1,740	1,902	1,629	1,163	1,258	1,136i
323 Central State University .....	1,889	1,691	1,640	3,976	673	--	--	--
324 Langston University .....	1,881	1,750	1,310	1,200	2,349	--	--	--
325 Williams College .....	1,853	1,716i	1,580i	1,444i	1,308i	1,172	1,056i	942i
326 Santa Clara University .....	1,815	2,103	1,579	1,569	1,396	1,355	1,094	962
327 Stephen F Austin St U .....	1,771	1,490	1,178	1,390	1,417	791	863	896i
328 CA St U Fullerton .....	1,749e	1,749i	1,749i	1,749i	1,749i	1,749	1,168	1,118i
329 Fordham University .....	1,737	1,936	1,816	2,501	2,648	2,386	2,190	1,850i
330 Central Michigan U .....	1,733	1,715	1,066	1,071	866	1,025	1,164	669
Total, 1st 330 insts. ....	19,749,554	18,669,708	17,340,375	16,062,687	14,739,806	13,232,303	11,950,927	10,744,930
331 Amherst College .....	1,724	2,080	1,751	1,792	1,557	1,549	1,400i	1,254i
332 Villanova University .....	1,670	1,560	1,461	1,390	1,440	696	755	547i
333 Wellesley College .....	1,666e	1,666i	1,666i	1,666i	1,666i	1,666e	1,360	1,137i
334 Wentworth Inst of Tech .....	1,634	1,287	1,460	1,435	1,383	1,457	1,431i	1,405i
335 Boise State University .....	1,630	--	--	--	--	--	--	--
336 University of Scranton .....	1,596	--	--	--	--	--	--	--
337 New Sch for Socl Res .....	1,559	1,572	1,164	1,026	1,000	1,282	585	425i
338 Smith College .....	1,545i	1,481i	1,392i	1,398	1,774	1,264	1,265i	1,265i
339 Cooper Union .....	1,515	1,241i	971i	701i	431i	161	219i	277i
340 DePaul University .....	1,510	914	786	972	905	576	617	376i
Total, 1st 340 insts. ....	19,765,603	18,681,509	17,351,026	16,073,067	14,749,962	13,240,954	11,958,559	10,751,616
341 Fisk University .....	1,502	1,317	641	1,156	1,157	1,741	862	732i
342 Morgan State University .....	1,496	1,223	701	657	649	742e	635	886
343 SUNY Col Buffalo .....	1,496	1,430	1,240	832	863i	893i	923i	953i
344 Trinity University .....	1,486	1,321i	1,157i	993i	829i	665	591	454
345 Midwestern University .....	1,482	1,097	1,372	1,161	1,651	2,252	1,772	1,268
346 Hampshire College .....	1,447	--	--	--	--	--	--	--
347 Barnard College .....	1,440	1,150	758	653	717	677	670i	667i
348 U WI Stout .....	1,433	2,019	2,282	755	635	464	379i	297i
349 Tougaloo College .....	1,415	1,302	1,262	1,028	1,191	--	--	--
350 U of Nebraska Omaha .....	1,397	1,737	1,354	1,002	410	235	186	151
Total, 1st 350 insts. ....	19,780,197	18,694,105	17,361,793	16,081,304	14,758,064	13,248,623	11,964,577	10,757,024

See explanatory information and SOURCE at end of table.

**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
351 Western Washington U .....	1,393e	1,393i	1,393i	1,393i	1,393i	1,393	1,297	953i
352 Pomona College .....	1,392	1,531	1,339	1,179	1,264	536	600i	662i
353 Saginaw Valley St U .....	1,383	--	--	--	--	--	--	--
354 Sam Houston State U .....	1,380	1,072	1,238	380	219	206	320	390
355 Texas Woman's University ..	1,380	1,394	1,359	1,336	969	825	709	740
356 Ntheastrn OH U Col Med ....	1,362	1,747	1,408	1,409	1,616	1,956	1,349	1,020
357 Ball State University .....	1,322	1,211	1,241	850	798	696	664	725
358 U of Charleston SC .....	1,309	--	--	--	--	--	--	--
359 Radcliffe College .....	1,300	--	--	--	--	--	--	--
360 Baylor University .....	1,275	1,469	1,067	1,143	1,841	934	931	870i
Total, 1st 360 insts. ....	19,793,693	18,703,922	17,370,838	16,088,994	14,766,164	13,255,169	11,970,447	10,762,384
361 Delaware State University ....	1,262	1,387	1,330	1,027	1,027	--	--	--
362 U of West Florida .....	1,239	1,350	1,254	1,358	1,619	1,313	2,099i	2,882i
363 U of Southern Colorado .....	1,228	--	--	--	--	--	--	--
364 Morris Brown College .....	1,227	1,341e	887	647e	164	--	--	--
365 CUNY Col Staten Island .....	1,209	1,236	1,140	1,351	1,171	867	788i	712i
366 Manhattan College .....	1,189	1,363i	1,532i	1,701i	1,870i	2,039i	2,208	1,857
367 Georgia Southern U .....	1,183	1,007i	832i	657i	482i	307	317i	323i
368 Canisius College .....	1,180	856	337	619	209	309	289i	270i
369 U WI Stevens Point .....	1,179	827	498	449	432	362	380i	394i
370 Loyola College .....	1,158	--	--	--	--	--	--	--
Total, 1st 370 insts. ....	19,805,747	18,713,289	17,378,648	16,096,803	14,773,138	13,260,366	11,976,528	10,768,822
371 Eastern Michigan U .....	1,129	1,141i	1,152i	1,163i	1,174i	1,185	1,021i	860i
372 Swarthmore College .....	1,128	1,102i	1,078i	1,054i	1,030i	1,006	822i	639i
373 University of the Pacific .....	1,124	1,020	1,103	897	990	968i	951i	934i
374 Nova University .....	1,120	1,323	1,667	1,601	1,108	962	873	730i
375 Morehouse College .....	1,119	1,223	926	868	1,093	--	--	--
376 Phila Col Osteopathic Med ..	1,095	506	423i	340	512	381	344	233
377 U of Texas Pan American ....	1,095	1,011i	929i	847i	765i	683	637i	593i
378 U of Northern Iowa .....	1,079	687	559	357	156	95	78i	62i
379 Hofstra University .....	1,073	211	493	515	366	165	258	278
380 Elizabeth City State U .....	1,050	341	0	15	26	--	--	--
Total, 1st 380 insts. ....	19,816,759	18,721,854	17,386,978	16,104,460	14,780,358	13,265,811	11,981,512	10,773,151
381 Chicago State University .....	1,048	943i	842i	741i	640i	539	506i	474i
382 Union College (NY) .....	1,032	1,415	1,254i	1,098i	942i	786i	630i	474i
383 Murray State University .....	1,026	892i	759i	626i	493i	360	524i	684i
384 Claremont Graduate Sch .....	1,011	639	571	583	746	1,353	1,367	1,280i
385 SUNY Col Oswego .....	1,001	792	350	160	467	341	334	422i
386 Carleton College .....	940	927i	916i	905i	894i	883	717i	553i
387 CUNY York College .....	930	877	850	816	826	723	659	779i
388 College of the Holy Cross ....	928	827i	727i	627i	527i	427	397i	373i
389 U of Missouri System Off .....	915	2,969	3,561	2,991	9,500	8,734	9,512	8,735
390 James Madison University ....	910	950i	988i	1,026i	1,064i	1,102	919i	736i
Total, 1st 390 insts. ....	19,826,500	18,733,085	17,397,796	16,114,033	14,796,457	13,281,059	11,997,077	10,787,661
391 Mankato State University .....	910	785i	660i	535i	410i	285	254i	227i
392 Haverford College .....	909e	909i	909i	909i	909i	909	806i	706i
393 Franklin & Marshall Col .....	906	885i	865i	845i	825i	805	363	308i
394 U of Houston Downtown .....	900	--	--	--	--	--	--	--
395 Northern Marianas College ..	895	--	--	--	--	--	--	--
396 Western Kentucky U .....	893	786i	679i	572i	465i	358	369i	376i
397 Hope College .....	862	--	--	--	--	--	--	--
398 St John's University (NY) .....	860	1,069	593	759	632	814	769i	726i
399 CUNY Jay Col Crim Just .....	859	--	--	--	--	--	--	--
400 SUNY Col Plattsburgh .....	846	1,022	1,217	1,254	1,030	1,164	922	1,075
Total, 1st 400 insts. ....	19,835,340	18,738,541	17,402,719	16,118,907	14,800,728	13,285,394	12,000,560	10,791,079

See explanatory information and SOURCE at end of table.



**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
401 Indiana State University .....	835	1,267	1,179	903	967	949	541	782
402 Grand Valley State U .....	830	730	611	570	465	576	484i	392i
403 Kirksville Col Osteo Med .....	829	856	624	539	727	791i	855	769i
404 University San Francisco .....	825	763i	704i	645i	586i	527	522i	520i
405 PA College of Optometry .....	819	--	--	--	--	--	--	--
406 Arkansas State University ....	806	776	742	755	715	432	422i	416i
407 McNeese State University .....	792	719i	649i	579i	509i	439i	369	1,423e
408 Middlebury College .....	788	745i	702i	659i	616i	573	533i	499i
409 Southeast Missouri St U .....	788	--	--	--	--	--	--	--
410 Milwaukee School of Eng .....	786	748	486	508	565	640	614i	594i
Total, 1st 410 insts. ....	19,843,438	18,745,145	17,408,416	16,124,065	14,805,878	13,290,321	12,004,900	10,796,474
411 Phila Col of Phar & Sci .....	755	907	968	1,153	778	405	342	425
412 Baylor Col of Dentistry .....	754	745	824	849	788	692	598	629
413 Central Washington U .....	748	685i	622i	559i	496i	433	549i	664i
414 Northeast Missouri St U .....	743	720	1,118	1,522	1,605	772	402	272i
415 National Hispanic U .....	740	--	--	--	--	--	--	--
416 University of San Diego .....	736	--	--	--	--	--	--	--
417 West Chester U of PA .....	710	628i	546i	464i	382i	300	240i	180i
418 U WI La Crosse .....	708	875	862	795	531	309	347	338
419 Augsburg College .....	678	620	382	139	115	90	82i	75i
420 Bucknell University .....	661	615i	573i	531i	489i	447	441i	438i
Total, 1st 420 insts. ....	19,850,671	18,750,940	17,414,311	16,130,077	14,811,062	13,293,769	12,007,901	10,799,495
421 Fort Lewis College .....	660	--	--	--	--	--	--	--
422 Bridgewater State College ...	655	594i	536i	478i	420i	362	288i	216i
423 University of Richmond .....	652	--	--	--	--	--	--	--
424 Reed College .....	641	630i	623i	616i	609i	602	543i	486i
425 Knox College .....	639	721	554	410	382	292	250i	212i
426 CA St U Bakersfield .....	634	--	--	--	--	--	--	--
427 Whitman College .....	633	--	--	--	--	--	--	--
428 CA Sch Prof Psy Fresno .....	616	875	661	1,382	1,922	1,015	535	267i
429 Trinity College .....	605	588i	573i	558i	543i	528	454i	380i
430 Marshall University .....	604	663	918	1,270	1,679	1,526	938	837
Total, 1st 430 insts. ....	19,857,010	18,755,011	17,418,176	16,134,791	14,816,617	13,298,094	12,010,909	10,801,893
431 Spelman College .....	603	547	444	505	399	--	--	--
432 Benedict College .....	600	702	0	0	0	--	--	--
433 Vassar College .....	596	622i	644i	666i	688i	710	595e	642i
434 Duquesne University .....	589	340	572	558	357	357	357	380i
435 Mount Holyoke College .....	584e	584i	584i	584i	584i	584	479i	374
436 St Mary's U San Antonio .....	582	533i	486i	439i	392i	345	305i	267i
437 CA St U Dominguez Hills .....	581	--	--	--	--	--	--	--
438 Rose Hulman Inst of Tech ...	575	--	--	--	--	--	--	--
439 Norfolk State University .....	566	793	752	826	652	425	304	456
440 John Carroll University .....	543	465i	390i	315i	240i	165	266	177i
Total, 1st 440 insts. ....	19,862,829	18,759,597	17,422,048	16,138,684	14,819,929	13,300,680	12,013,215	10,804,189
441 CA St U Sacramento .....	537	--	--	--	--	--	--	--
442 Alabama State University .....	534	614	448	423	456	--	--	--
443 U of NC Asheville .....	531	--	--	--	--	--	--	--
444 Winston Salem State U .....	529	583	617	532	650	--	--	--
445 Arkansas Tech University ....	527	--	--	--	--	--	--	--
446 Allegheny College .....	522	--	--	--	--	--	--	--
447 Lincoln University (PA) .....	505	1,090	510	845	768e	867	648i	432i
448 Lafayette College .....	500	--	--	--	--	--	--	--
449 Calvin College .....	493	--	--	--	--	--	--	--
450 CUNY Bernard Baruch Col ..	491	1,459	1,897	1,150	646	194	234i	266i
Total, 1st 450 insts. ....	19,867,998	18,763,343	17,425,520	16,141,634	14,822,449	13,301,741	12,014,097	10,804,887

See explanatory information and SOURCE at end of table.

**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
451 U WI Parkside .....	487	587	561	798	883	704	659 i	614 i
452 Bradley University .....	483	481 i	479 i	477 i	475 i	473	419 i	371 i
453 Hamilton College .....	475	--	--	--	--	--	--	--
454 Abilene Christian U .....	468	599	493	312	353	334	295 i	260 i
455 Bowie State University .....	465	425	234	35	0	--	--	--
456 Eastern Kentucky U .....	457	--	--	--	--	--	--	--
457 West Texas A&M U .....	451	550	560	533	597	470	677	524
458 U WI Green Bay .....	449	335	329	449	616	376	402 i	425 i
459 SUNY Col Old Westbury .....	440	--	--	--	--	--	--	--
460 Connecticut College .....	432	427 i	423 i	419 i	415 i	411	332	269 i
Total, 1st 460 insts. ....	19,872,605	18,766,747	17,428,599	16,144,657	14,825,788	13,304,509	12,016,881	10,807,350
461 Winthrop University .....	428	376 i	326 i	276 i	226 i	176	162 i	148 i
462 CA Sch Prof Psy L.A. ....	427	378	490	1,316	1,551	616	500	500
463 Gustavus Adolphus Col .....	426	--	--	--	--	--	--	--
464 Virginia Military Inst .....	426	376 i	328 i	280 i	232 i	184	188 i	190 i
465 Selma University .....	420	798	650	790	816	--	--	--
466 Denison University .....	418	426 i	434 i	442 i	450 i	458	479 i	497 i
467 Southern Col of Optometry ..	414	--	--	--	--	--	--	--
468 Lawrence University .....	404	447 i	486 i	525 i	564 i	603	480 i	360 i
469 Monmouth College (NJ) .....	404 e	184 e	175	96	100	0	0 i	0 i
470 U WI River Falls .....	404	370	192	122	142	85	73 i	65 i
Total, 1st 470 insts. ....	19,876,776	18,770,102	17,431,680	16,148,504	14,829,869	13,306,631	12,018,763	10,809,110
471 New York Inst Technology ...	402	1,297 i	2,192 i	3,087	3,998	5,678	6,093	4,838 i
472 U Osteo Med & Hlth Sci .....	396	36	163	67	97	108	20	12 i
473 U of Southern Maine .....	392 e	--	--	--	--	--	--	--
474 Southeastern Louisiana U ....	390	--	--	--	--	--	--	--
475 U WI Eau Claire .....	387	350	292	430	544	369	324 i	281 i
476 York Technical College .....	384	--	--	--	--	--	--	--
477 Washington and Lee U .....	383	342 i	304 i	266 i	228 i	190	280	263
478 Drake University .....	379	190	354	182	167	163	144 i	126 i
479 Andrews University .....	377	278	255	394	200	190 e	160 i	130 i
480 Johnson C Smith U .....	377	276	475	477	480	--	--	--
Total, 1st 480 insts. ....	19,880,643	18,772,871	17,435,715	16,153,407	14,835,583	13,313,329	12,025,784	10,814,760
481 SUNY Col of Optometry .....	377	329	231	483	494	375	518	448 i
482 SUNY Col Brockport .....	373	406	948	833	357	219	205 i	195 i
483 Adelphi University .....	370 i	355	405	499 i	592	466 i	341	317 i
484 Augustana College .....	369	336 i	305 i	274 i	243 i	212	172 i	133 i
485 Northern Kentucky U .....	369	--	--	--	--	--	--	--
486 Simmons College .....	368	340 i	315 i	290 i	265 i	240 i	215 i	190 i
487 Saint John's University .....	367	--	--	--	--	--	--	--
488 Bowdoin College .....	363 e	363 i	363 i	363 i	363 i	363	398 i	431 i
489 Appalachian State U .....	358	--	--	--	--	--	--	--
490 Saint Cloud State U .....	353	345 i	337 i	329 i	321 i	313	258 i	205 i
Total, 1st 490 insts. ....	19,884,310	18,775,345	17,438,619	16,156,478	14,838,218	13,315,517	12,027,891	10,816,679
491 Rust College .....	346	798	289	156	214	--	--	--
492 GMI Eng & Mgmt Inst .....	345	--	--	--	--	--	--	--
493 SUNY Col Genesee .....	344	327	214	316	188	218	179 i	142 i
494 Jarvis Christian College .....	336	97	60	75	60	--	--	--
495 North Carolina Central U .....	335	755	477 i	199	555 e	571	515 i	464 i
496 Indiana U of PA All Cmp .....	333	--	--	--	--	--	--	--
497 New England Col Opt .....	333	--	--	--	--	--	--	--
498 Grinnell College .....	332	340 i	347 i	354 i	361 i	368	342 i	318 i
499 U WI Oshkosh .....	329	310	344	312	217	166	145 i	127 i
500 Colorado College .....	323	425	464	151	74	53	72 i	85 i
Total, 1st 500 insts. ....	19,887,666	18,778,397	17,440,814	16,158,041	14,839,887	13,316,893	12,029,144	10,817,815

See explanatory information and SOURCE at end of table.



**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
501 Northwestern St U LA .....	317	349	119	112	77	7	9i	11i
502 Towson State University .....	316	279i	244i	209i	174i	139	201	66
503 US Coast Guard Academy .....	310	281i	252i	223i	194i	165	150i	140i
504 Fairfield University .....	305	248i	194i	140i	86i	32	33i	33i
505 Pittsburg State U .....	303	321i	337i	353i	369i	385	308i	233i
506 Southern Connecticut St U ..	299	--	--	--	--	--	--	--
507 Colby College .....	296	--	--	--	--	--	--	--
508 La Salle University .....	296	--	--	--	--	--	--	--
509 New Mexico Highlands U .....	291	253i	216i	179i	142i	105	478i	850i
510 Evergreen State College .....	290	--	--	--	--	--	--	--
Total, 1st 510 insts. ....	19,890,689	18,780,128	17,442,176	16,159,257	14,840,929	13,317,726	12,030,323	10,819,148
511 Pitzer College .....	290	--	--	--	--	--	--	--
512 Davidson College .....	284	--	--	--	--	--	--	--
513 Ithaca College .....	284	269i	258i	247i	236i	225	244i	260i
514 St Olaf College .....	284	196	167	172	136	210	216i	222i
515 Long Island University .....	278	217	170	171	313	572	324	116
516 Ohio Wesleyan University ....	275	--	--	--	--	--	--	--
517 Fayetteville State U .....	273	187	275	154	360	--	--	--
518 Drew University .....	272	--	--	--	--	--	--	--
519 Rhodes College .....	271	--	--	--	--	--	--	--
520 SUNY Col Fredonia .....	271	283	54	130i	206i	282	277i	272i
Total, 1st 520 insts. ....	19,893,471	18,781,280	17,443,100	16,160,131	14,842,180	13,319,015	12,031,384	10,820,018
521 Lewis and Clark College .....	269	--	--	--	--	--	--	--
522 University Saint Thomas .....	265	--	--	--	--	--	--	--
523 Butler University .....	264	--	--	--	--	--	--	--
524 Kenyon College .....	254	--	--	--	--	--	--	--
525 Ouachita Baptist U .....	254	--	--	--	--	--	--	--
526 Furman University .....	253	237i	225i	213i	201i	189	68	103i
527 Millersville U of PA .....	251	--	--	--	--	--	--	--
528 Emporia State University .....	249	203i	161i	119i	77i	35	29i	27i
529 Skidmore College .....	249	--	--	--	--	--	--	--
530 Col of St Scholastica .....	247	--	--	--	--	--	--	--
Total, 1st 530 insts. ....	19,896,026	18,781,720	17,443,486	16,160,463	14,842,458	13,319,239	12,031,481	10,820,148
531 University of New Haven .....	244	--	--	--	--	--	--	--
532 Loyola U of New Orleans .....	243	206i	172i	138i	104i	70	56i	43i
533 U of Northern Colorado .....	240	271	132	223	182	33	50	61
534 Morehead State University .....	239	212i	186i	160i	134i	108	86i	68i
535 Linfield College .....	230	184i	138i	92i	46i	0	11i	19i
536 Northwest Missouri St U .....	227	184i	143i	102i	61i	20	16i	12i
537 Bethune Cookman College ..	221	626	599	554	440	--	--	--
538 Juniata College .....	221	--	--	--	--	--	--	--
539 Henderson State U .....	217	174i	133i	92i	51i	10	6i	6i
540 Mississippi Valley St U .....	213	71	64	43	14	31	0	0i
Total, 1st 540 insts. ....	19,898,321	18,783,648	17,445,053	16,161,867	14,843,490	13,319,511	12,031,706	10,820,357
541 Grambling State U .....	210	277i	343i	409	106	64	136	137i
542 Central Connecticut St U .....	208	--	--	--	--	--	--	--
543 East Texas State U .....	206	176	260	279	401	269	429	408
544 SUNY Col Purchase .....	206	--	--	--	--	--	--	--
545 U WI Whitewater .....	204	164	141	78	134	70	60i	53i
546 West Georgia College .....	200	240i	276i	312i	348i	384	356	280
547 Wilberforce University .....	200	--	--	--	--	--	--	--
548 Northeastern Illinois U .....	197	257	33	118	77	37	52i	63i
549 West Virginia State Col .....	190	179	218	146	81	--	--	--
550 University of Bridgeport .....	189	--	--	--	--	--	--	--
Total, 1st 550 insts. ....	19,900,331	18,784,941	17,446,324	16,163,209	14,844,637	13,320,335	12,032,739	10,821,298

See explanatory information and SOURCE at end of table.

**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
551 Western Maryland College ...	188	--	--	--	--	--	--	--
552 Lawrence Tech University ....	187	--	--	--	--	--	--	--
553 Oakwood College .....	186	206	179	226	0	--	--	--
554 Western Carolina U .....	183	--	--	--	--	--	--	--
555 College of Wooster .....	182	170i	159i	148i	137i	126	129i	131i
556 Kutztown U of PA .....	182	146	55	119	195	360	330i	306i
557 East Stroudsburg U of PA ....	181	224	202	440	447	486	414i	347i
558 MA Col Phar Allied Hlth .....	181	156	215	73	41	90i	137i	184i
559 Claflin College .....	180	240	383	205	0e	--	--	--
560 Sul Ross State University ....	179	139	156	301	215	155	141i	129i
Total, 1st 560 insts. ....	19,902,160	18,786,222	17,447,673	16,164,721	14,845,672	13,321,552	12,033,890	10,822,395
561 SUNY Col Cortland .....	173	118	96	254	168	151	127i	104i
562 Savannah State College .....	173	195	212	221	179	--	--	--
563 Southern Oregon State Col ..	173	130	109	57	89	0	0	0
564 Youngstown State U .....	172	188i	201i	214i	227i	240	201	156
565 Seton Hall University .....	171i	164i	153i	186i	220i	254i	287i	321i
566 Saint Joseph College .....	166	148i	132i	116i	100i	84	77i	74i
567 Goucher College .....	164	71	73	87	78	62	72i	82i
568 Siena College .....	164	--	--	--	--	--	--	--
569 Middle Tennessee State U ....	163	--	--	--	--	--	--	--
570 Point Loma Nazarene Col ....	162	--	--	--	--	--	--	--
Total, 1st 570 insts. ....	19,903,841	18,787,236	17,448,649	16,165,856	14,846,733	13,322,343	12,034,654	10,823,132
571 Northern Michigan U .....	160	157i	154i	151i	148i	145	126i	107i
572 Valparaiso University .....	160e	160i	160i	160i	160i	160	19	147
573 Moorhead State University ....	157	132i	110i	88i	66i	44	35i	28i
574 Philander Smith College .....	157	145	154	120	165	--	--	--
575 CA St U San Bernardino .....	156	125i	96i	67i	38i	9	19	41
576 Bates College .....	152	--	--	--	--	--	--	--
577 Central Missouri St U .....	148	--	--	--	--	--	--	--
578 Macalester College .....	148	120i	93i	66i	39i	12	8i	6i
579 WV Sch of Osteo Med .....	146	112	168	134	120	85	90	78i
580 Fairleigh Dickinson U .....	140	118	859	3,183	3,356	4,196	3,210	2,276
Total, 1st 580 insts. ....	19,905,365	18,788,305	17,450,443	16,169,825	14,850,825	13,326,994	12,038,161	10,825,815
581 Oral Roberts University .....	140	82	37	60	1,206	2,637	2,519i	2,401i
582 Saint Joseph's University ....	140	124i	111i	98i	85i	72	92i	107i
583 Beloit College .....	136	128i	120i	112i	104i	96	80i	68i
584 Western State College .....	134	117i	100i	83i	66i	49	22	27i
585 U of Central Oklahoma .....	132	141i	150i	159i	168i	177	140i	105i
586 Antioch University .....	131	92	0	0	0	0	1i	2i
587 Whitworth College .....	128	--	--	--	--	--	--	--
588 University of Puget Sound ....	127e	127i	127i	127i	127i	127	100i	75i
589 SUNY Col Oneonta .....	126e	121e	121	104	77	67	77i	86i
590 Marietta College .....	125	--	--	--	--	--	--	--
Total, 1st 590 insts. ....	19,906,684	18,789,237	17,451,209	16,170,568	14,852,658	13,330,219	12,041,192	10,828,686
591 Bentley College .....	124	--	--	--	--	--	--	--
592 Bennett College .....	123	914	64	425	364	--	--	--
593 Chapman University .....	121	69	78i	86	81e	81	70i	60i
594 Delta State University .....	121	131i	139i	147i	155i	163	128i	96i
595 Kennesaw State College .....	121	--	--	--	--	--	--	--
596 Bloomsburg U of PA .....	120	--	--	--	--	--	--	--
597 Valdosta State University ....	120	--	--	--	--	--	--	--
598 University of Portland .....	117	305	169	370	462	598	481i	365i
599 Elizabethtown College .....	116	--	--	--	--	--	--	--
600 Iona College .....	116	--	--	--	--	--	--	--
Total, 1st 600 insts. ....	19,907,883	18,790,656	17,451,659	16,171,596	14,853,720	13,331,061	12,041,871	10,829,207

See explanatory information and SOURCE at end of table.

**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

Page 13 of 14

Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
601 Edinboro U of PA .....	111	102i	97i	92i	87i	82	68i	54i
602 Fuller Theological Sem .....	110	40	150	50	60	50	20	12
603 Pacific Lutheran U .....	107	208	130	577	44	70	75i	77i
604 Carroll College .....	104	--	--	--	--	--	--	--
605 Notre Dame College .....	102	--	--	--	--	--	--	--
606 Providence College .....	100	80	103	25	18	47	37	24i
607 SUNY Col Potsdam .....	99	104	140	91	145	113	144i	170i
608 California U of PA .....	94	96i	97i	98i	99i	100	80i	60i
609 Illinois Benedictine Col .....	94	80i	68i	56i	44i	32	61i	86i
610 Western New England Col .....	94	--	--	--	--	--	--	--
Total, 1st 610 insts. ....	19,908,898	18,791,366	17,452,444	16,172,585	14,854,217	13,331,555	12,042,356	10,829,690
611 Regis University .....	93	--	--	--	--	--	--	--
612 Eckerd College .....	91	--	--	--	--	--	--	--
613 Rollins College .....	91	134i	174i	214i	254i	294	70	95
614 Seattle University .....	91	59	94	148	241	167	0	10i
615 Quinnipiac College .....	89e	282i	471i	660i	849i	1,038	828i	621i
616 Hartwick College .....	88	--	--	--	--	--	--	--
617 SUNY Col New Paltz .....	87	131	257	387	107	36	220	198i
618 Kalamazoo College .....	84	--	--	--	--	--	--	--
619 King's College .....	81	--	--	--	--	--	--	--
620 Hendrix College .....	80	--	--	--	--	--	--	--
Total, 1st 620 insts. ....	19,909,773	18,791,972	17,453,440	16,173,994	14,855,668	13,333,090	12,043,474	10,830,614
621 Saint Mary's Col of MN .....	80	79i	78i	77i	76i	75	57i	43i
622 Columbia U Teachers Col .....	79	401	429	803	581	900	765	644i
623 Coppin State College .....	77	103	212	1,017	834	--	--	--
624 Clarion University of PA .....	76	69i	66i	63i	60i	57	45i	35i
625 U of Health Sci (MO) .....	75	105	0	0	0	58	83	54i
626 Columbia Union College .....	73	--	--	--	--	--	--	--
627 U WI Platteville .....	73	34	38	23	47	10	13i	13i
628 Loras College .....	72	62i	53i	44i	35i	26	17i	16i
629 Webb Inst Naval Archt .....	72	118i	160i	202i	244i	286	282i	281i
630 Wheeling Jesuit College .....	71	--	--	--	--	--	--	--
Total, 1st 630 insts. ....	19,910,521	18,792,943	17,454,476	16,176,223	14,857,545	13,334,502	12,044,736	10,831,700
631 Eastern NM U All Cmp .....	67	101i	133i	165i	197i	229	229	95
632 CA Sch Prof Psy S Diego .....	66	69	68	65i	62	59	0	0i
633 CUNY NY City Tech Col .....	66	--	--	--	--	--	--	--
634 Southwest State U .....	66	--	--	--	--	--	--	--
635 Western Oregon State Col .....	66	77i	86i	95i	104i	113	96i	82i
636 Montclair State U .....	65	143	131	76	25	36	45i	47i
637 U of Nebraska Kearney .....	60	49i	38i	27i	16i	5	18i	27i
638 U of Alaska Southeast .....	59	--	--	--	--	--	--	--
639 Westminster College .....	59	--	--	--	--	--	--	--
640 Augustana College .....	58	63i	64i	65i	66i	67	56i	49i
Total, 1st 640 insts. ....	19,911,153	18,793,445	17,454,996	16,176,716	14,858,015	13,335,011	12,045,180	10,832,000
641 Shaw University .....	53	6	0	0	0	--	--	--
642 Austin College .....	50	48i	48i	48i	48i	48	45i	44i
643 Col Osteo Med of Pacific .....	39	6	6	9	11	0	0	0
644 William Paterson Col NJ .....	26	252i	477i	702i	927i	1,152	1,010i	869i
645 Knoxville College .....	23e	33i	42i	51i	60	--	--	--
646 Xavier University .....	6	1	31i	60	116	149	234i	318i
647 Spalding University .....	2	--	--	--	--	--	--	--
648 Bemidji State University .....	0	94	32	74	60	48	40i	36i
649 Biola University .....	0	0	0	0	13	0	0	0
650 CA Inst of Integral Stu .....	0	--	--	--	--	--	--	--
Total, 1st 650 insts. ....	19,911,352	18,793,885	17,455,632	16,177,660	14,859,250	13,336,408	12,046,509	10,833,267

See explanatory information and SOURCE at end of table.

**Table B-32. Total R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Total							
	1993	1992	1991	1990	1989	1988	1987	1986
651 CA Sch Prof Psy Alameda ...	0	0	0	0	0	0	0	0
652 CA St U Hayward .....	0	58i	116i	174i	232i	290	267i	248i
653 CUNY H H Lehman Col .....	0e	--	--	--	--	--	--	--
654 Catholic U of PR .....	0	91	217	286	515	443	522	514i
655 Chicago Sch of Prof Psy .....	0	--	--	--	--	--	--	--
656 Dillard University .....	0	0	0	0	469	0	0	0i
657 Emmanuel College .....	0	256i	508i	760i	1,012i	1,264e	1,144	1,071i
658 Fielding Institute .....	0	0	0	0	0	0	0	0
659 Golden Gate University .....	0	--	--	--	--	--	--	--
660 Lake Forest College .....	0	26i	49i	72i	95i	118	103i	92i
Total, 1st 660 insts. ....	19,911,352	18,794,316	17,456,522	16,178,952	14,861,573	13,338,523	12,048,545	10,835,192
661 Maharishi International U .....	0e	--	--	--	--	--	--	--
662 Mayo Grad Sch of Med .....	0	0	0	0	0	0	0	0i
663 Pace University All Cmp .....	0e	--	--	--	--	--	--	--
664 Pacific Grad Sch of Psy .....	0	--	--	--	--	--	--	--
665 Pacific University .....	0	22i	44i	66i	88i	110	95i	87i
666 Pepperdine University .....	0	--	--	--	--	--	--	--
667 RAND Grad Sch Pol Stu .....	0	0	0	0	0	0	0	0i
668 Regis College .....	0	61i	118i	175i	232i	289	322	285
669 SUNY Inst of Tech Utica .....	0e	--	--	--	--	--	--	--
670 Stetson University .....	0	16i	31i	46i	61i	76	5	2i
Total, 1st 670 insts. ....	19,911,352	18,794,415	17,456,715	16,179,239	14,861,954	13,338,998	12,048,967	10,835,566
671 Talladega College .....	0	0	0	0	366	--	--	--
672 The Wright Institute .....	0	0	0	0	0	0	0	0
673 Trenholm State Tech Col .....	0	0	100	30	22	--	--	--
674 U CA System .....	0	0	0	0	0	26,439	19,307	13,926
675 U of Alaska Anchorage .....	0e	--	--	--	--	--	--	--
676 US International U .....	0	0	0	93	224	0	0	0
677 Union Institute .....	0	0	0	0	0	0	0	0i
678 University of Dallas .....	0	13i	25i	37i	49i	61	60i	60i
679 University of Hartford .....	0e	--	--	--	--	--	--	--
680 Voorhees College .....	0	0	0	0	211	--	--	--
Total, 1st 680 insts. ....	19,911,352	18,794,428	17,456,840	16,179,399	14,862,826	13,365,498	12,068,334	10,849,552
681 Widener U All Campuses .....	0	54i	105i	156i	207i	258	139	111
Total, 1st 681 insts. ....	19,911,352	18,794,482	17,456,945	16,179,555	14,863,033	13,365,756	12,068,473	10,849,663
Total, all other sampled insts. ....	0	0	119,657	103,747	111,777	96,519	83,578	77,329

<sup>1</sup> Johns Hopkins University includes Applied Physics Laboratory with \$447 million in total R&D expenditures.

<sup>2</sup> These data do not include R&D expenditures at university-associated federally funded research and development centers. See tables B-73 and B-74.

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:**  
e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
Total, all institutions .....	11,957,140	11,089,625	10,229,811	9,634,248	8,987,745	8,191,193	7,341,679	6,710,372
1 Johns Hopkins U <sup>1</sup> .....	673,601	666,696	641,239	599,851	590,184	509,009	476,290	412,714
2 University of Washington .....	268,819	257,840	221,124	203,353	182,453	160,261	145,184	141,973
3 MA Institute of Tech <sup>2</sup> .....	267,414	237,972	237,667	233,813	215,140	210,419	206,785	201,097
4 Stanford University .....	254,379	265,687	243,219	255,821	238,650	232,572	204,386	192,076
5 University of Michigan .....	249,951	223,452	206,276	180,456	174,875	160,854	137,558	118,069
6 U CA San Diego .....	243,149	219,843	200,451	182,555	171,479	159,778	142,751	128,250
7 U WI Madison .....	213,955	199,816	183,652	178,862	169,452	162,384	149,665	138,784
8 U CA San Francisco .....	210,148	202,283	190,936	175,257	159,906	137,747	117,302	105,694
9 Cornell University <sup>2</sup> .....	195,229	180,361	173,478	171,249	157,984	153,662	144,604	134,660
10 U CA Los Angeles .....	189,065	180,743	167,885	164,442	159,002	146,946	130,763	121,668
Total, 1st 10 insts. ....	2,765,710	2,634,693	2,465,927	2,345,659	2,219,125	2,033,632	1,855,288	1,694,985
11 Columbia U Main Division .....	182,696	174,777	163,561	156,270	146,712	139,558	133,018	128,436
12 Harvard University .....	181,969	174,632	156,014	154,090	143,451	133,003	119,955	111,503
13 University of Minnesota .....	174,716	165,926	164,887	143,810	132,880	119,789	109,003	100,308
14 U of Pennsylvania .....	173,593	159,574	144,451	133,747	123,810	115,080	111,185	105,925
15 Yale University .....	168,900	157,345	149,506	144,962	138,835	132,952	116,943	107,600
16 Pennsylvania State U .....	160,152	151,877	146,212	136,656	114,646	106,020	93,200	82,412
17 U CA Berkeley <sup>2</sup> .....	156,394	148,954	140,261	131,717	124,371	116,565	108,828	102,578
18 U of Southern California .....	149,965	141,713	132,230	123,714	119,005	112,615	101,749	92,906
19 University of Pittsburgh .....	141,776	121,077	99,932	90,700	81,217	72,462	62,060	55,805
20 University of IL Urbana .....	141,149	129,086	118,748	117,168	114,398	109,633	104,420	83,996
Total, 1st 20 insts. ....	4,397,020	4,159,654	3,881,729	3,678,493	3,458,450	3,191,309	2,915,649	2,666,454
21 U TX Austin .....	139,126	124,614	113,192	109,593	94,311	89,982	88,395	75,152
22 University of Colorado .....	138,584	129,894	119,068	116,394	109,145	96,041	83,144	74,887
23 Duke University .....	136,377	125,742	114,879	106,053	99,036	86,240	67,925	62,879
24 U of NC Chapel Hill .....	130,920	113,774	103,485	92,468	83,280	82,723	72,529	64,625
25 University of Rochester <sup>2</sup> .....	130,898	110,413	106,874	105,644	101,049	92,533	80,322	75,939
26 Washington University .....	129,482	123,863	112,475	105,759	96,829	88,843	77,757	68,399
27 Texas A&M University .....	122,533	112,918	97,727	93,001	93,584	90,163	75,432	75,946
28 University of Arizona .....	113,423	105,912	101,818	92,920	80,533	73,309	65,024	61,973
29 Ohio State University .....	109,069	97,940	88,542	78,878	75,484	69,135	58,555	56,418
30 U CA Davis .....	105,255	91,318	79,961	77,424	72,718	63,435	56,622	48,549
Total, 1st 30 insts. ....	5,652,687	5,296,042	4,919,750	4,656,627	4,374,419	4,023,713	3,641,354	3,331,221
31 California Inst of Tech <sup>2</sup> .....	103,888	99,198	100,820	90,577	84,167	78,750	71,086	63,708
32 Georgia Institute of Tech .....	98,398	101,295	101,476	94,842	98,048	78,798	63,132	58,432
33 University of Chicago <sup>2</sup> .....	95,930	97,182	93,683	96,327	90,459	80,967	75,889	73,304
34 U of Alabama Birmingham .....	94,762	82,392	76,317	74,486	68,204	62,369	54,534	45,337
35 New York University .....	93,633	87,081	81,896	80,756	81,143	77,746	76,126	69,099
36 U of Iowa .....	93,483	88,360	81,007	79,046	74,271	64,370	57,159	52,497
37 Case Western Reserve U .....	91,867	83,387	76,390	70,515	68,632	59,078	53,580	47,032
38 University of Miami .....	91,472	81,856	69,847	68,144	63,101	48,971	38,052	36,531
39 Baylor Col of Medicine .....	87,623	85,734	78,752	75,793	69,336	60,825	49,834	46,729
40 U MD College Park .....	85,041	82,469	77,866	66,410	58,924	55,365	55,194	43,769
Total, 1st 40 insts. ....	6,588,784	6,184,996	5,757,804	5,453,523	5,130,704	4,690,952	4,235,940	3,867,659
41 Vanderbilt University .....	83,683	78,426	71,021	66,747	56,151	44,646	31,343	27,269
42 University of Utah .....	83,237	79,386	68,769	62,297	61,819	57,383	54,226	51,428
43 SUNY Buffalo .....	80,723	77,628	68,945	66,876	64,453	60,097	51,212	47,308
44 Emory University .....	80,424	69,894	60,586	52,367	46,497	43,668	36,698	32,819
45 Carnegie Mellon U <sup>2</sup> .....	78,666	69,848	65,290	64,550	65,079	63,009	53,817	41,706
46 Northwestern University .....	77,687	69,241	62,718	62,183	57,510	54,245	49,286	46,755
47 Indiana University .....	77,377	69,871	61,831	57,155	58,334	52,498	44,211	40,024
48 U of Tennessee System .....	76,578	72,047	63,575	58,644	57,736	53,897	45,808	42,615
49 University of Virginia .....	75,580	68,151	61,060	58,801	51,214	47,482	41,267	38,541
50 Woods Hole Ocngrphc Inst ..	73,546	74,229	67,154e	62,356	64,333	49,400	42,239	38,666
Total, 1st 50 insts. ....	7,376,285	6,913,717	6,408,753	6,065,499	5,713,830	5,217,277	4,686,047	4,274,790

See explanatory information and SOURCE at end of table.

**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
51 Purdue University .....	72,954	68,224	67,810	64,464	63,979	64,163	56,302	56,475
52 Yeshiva University .....	71,771	68,152	67,831	65,066	58,224	58,823	59,768	56,922
53 University of Florida .....	71,704	67,590	66,777	64,614	60,731	54,785	49,311	46,751
54 Boston University .....	71,593	66,677	60,166	60,459	56,402	51,918	49,406	45,457
55 Michigan State University ....	70,294	66,466	61,646	58,221	51,741	49,771	44,989	47,725
56 Colorado State University ....	68,733	64,679	55,689	50,744	46,572	44,600	38,961	36,592
57 SUNY Stony Brook .....	68,023	63,608	58,977	55,911	49,726	54,017	40,302	35,249
58 U TX SW Med Ctr Dallas .....	67,943	61,499	57,746	54,965	51,254	48,357	45,382	38,504
59 New Mexico State U .....	64,821	62,872	57,522	54,688	45,660	43,481	37,904	33,394
60 U CA Irvine .....	64,546	55,331	52,652	52,492	46,492	42,894	38,138	38,328
Total, 1st 60 insts. ....	8,068,667	7,558,815	7,015,569	6,647,123	6,244,611	5,730,086	5,146,510	4,710,187
61 NC State U Raleigh .....	62,470	50,501	46,894	43,787	37,783	34,256	33,662	30,851
62 VA Polytech Inst & St U .....	61,708	51,281	47,866	45,949	38,597	33,771	32,129	30,259
63 Oregon State University .....	61,118	59,739	51,099	50,544	49,112	48,877	46,774	41,307
64 University of Cincinnati .....	57,394	56,375	47,445	44,966	40,598	35,986	32,044	27,758
65 Princeton University <sup>2</sup> .....	56,746	55,722	52,335	51,559	47,176	47,245	43,505	36,199
66 Rutgers the State U NJ .....	55,169	56,625	48,822	40,977	35,896	29,204	27,178	24,059
67 U CA Santa Barbara .....	54,057	52,777	46,647	47,873	39,227	36,205	32,856	27,320
68 U MD Baltimore Prof Sch .....	53,556	48,088	43,682	38,841	35,970	33,102	26,244	21,735
69 Louisiana State U System .....	52,598	48,641	57,059	48,802	40,114	35,578	31,089	27,808
70 University of Georgia .....	52,085	48,962	45,019	43,864	42,797	39,703	35,261	32,184
Total, 1st 70 insts. ....	8,635,568	8,087,526	7,502,437	7,104,285	6,651,881	6,104,013	5,487,252	5,009,667
71 Iowa St U of Sci & Tech <sup>2</sup> .....	50,695	45,144	42,793	34,043	28,895	23,306	19,682	17,376
72 University of IL Chicago .....	50,415	48,484	43,203	43,968	43,288	40,260	34,570	30,109
73 CUNY Mt Sinai Sch of Med .....	49,800	50,853	42,035	43,607	37,233	32,852	31,024	26,166
74 University of Connecticut .....	49,051	45,967	46,156	43,477	46,184	38,953	36,884	36,142
75 Virginia Commonwealth U ....	48,777	45,891	44,974	41,606	35,151	31,150	31,095	27,242
76 U TX Hlth Sci Ctr San Ant .....	48,467	41,048	32,770	29,431	29,324	27,528	22,469	22,779
77 Georgetown University .....	48,463	42,659	41,597	36,093	37,351	30,666	24,477	19,894
78 University of Kentucky .....	46,774	39,828	31,636	29,612	27,010	27,724	26,261	21,736
79 Tufts University .....	46,625	42,112	39,113	38,290	40,771	41,953	37,148	32,696 i
80 Utah State University .....	45,426	54,904	61,762	58,965	42,449	34,763	22,109	22,814
Total, 1st 80 insts. ....	9,120,061	8,544,416	7,928,476	7,503,377	7,019,537	6,433,168	5,772,971	5,266,621
81 Dartmouth College .....	44,092	38,791	34,317	30,135	27,222	25,729	21,864	18,816 i
82 Washington State U .....	43,678	38,213	32,257	26,864	22,697	21,361	21,274	20,115
83 University of New Mexico .....	42,866	40,033	30,141	25,449	23,934	24,862e	29,096	35,810
84 Wake Forest University .....	41,861	37,505	33,385	30,182	28,511	23,026	18,772	16,497 i
85 U of Alaska Fairbanks .....	41,616	32,066	34,335	31,896	26,659	23,441e	21,523 i	19,607 i
86 University Hawaii Manoa .....	41,362	47,684	44,857	42,665	40,574	38,560	34,472	35,322
87 U TX MD Anderson Cnrc Ctr .....	41,158	34,492	32,314	28,889	28,992	27,129	22,162	21,304
88 Wayne State University .....	40,367	35,569	30,583	28,488	28,167	22,716	16,927	15,789
89 Oregon Health Sciences U .....	38,913	33,548	28,897	27,241	24,162	18,240	15,379	13,241
90 Brown University .....	38,851	37,856	35,571	36,919	34,506	35,150	32,024	25,333
Total, 1st 90 insts. ....	9,534,825	8,920,173	8,265,133	7,812,125	7,304,961	6,693,382	6,006,464	5,488,455
91 Florida State University .....	38,690	27,649	28,495	32,927	25,498	24,027	21,416	21,850
92 U TX Hlth Sci Ctr Houston ...	38,664	36,478	32,778	29,017	29,500	27,658	24,727	22,604
93 University of Dayton .....	38,333	34,927	31,132	29,044	26,650	26,101	25,370	23,631
94 Thomas Jefferson U .....	38,293	28,861	23,100	22,451	21,311	16,766	14,070	7,307
95 University of Kansas .....	37,738	31,992	26,419	26,786	26,420	24,880	22,941	21,837
96 Tulane University .....	36,940	33,304	36,713	28,331	24,095	23,727	21,836	18,420
97 Rockefeller University .....	36,854	37,832	36,759	36,788	41,192	37,452	37,983	35,738
98 U Med & Dent NJ .....	35,524	39,092	38,768	33,185	27,983	21,849	16,989	15,840
99 University of Houston .....	34,350	21,881	20,140	17,575	16,358	14,152	11,040	9,680
100 University of Oklahoma .....	33,298	29,733	25,786	16,871	17,020	16,326	14,453	14,263
Total, 1st 100 insts. ....	9,903,509	9,241,922	8,565,223	8,085,100	7,560,988	6,926,320	6,217,289	5,679,625

See explanatory information and SOURCE at end of table.



**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
101 U of Rhode Island .....	32,609	25,480e	23,980	20,511	21,940	22,967	19,289	19,933 i
102 U MA Worcester .....	32,485	35,413	--	--	--	--	--	--
103 U MA Amherst .....	32,065	33,408	--	--	--	--	--	--
104 U of VT & State Agri Col .....	31,530	32,757	30,860	30,555	28,535	25,539	22,289	19,848
105 Medical Col of Wisconsin .....	31,261	27,668	25,062	21,594	21,432	19,803	15,551	13,600
106 West Virginia University .....	31,092	27,740	19,582	21,639	15,662	14,430	12,099	12,708
107 U TX Med Br Galveston .....	30,555	24,281	20,974	21,693	23,152	19,717	16,738	15,307 i
108 Arizona State University .....	30,032	33,148	26,246	26,590	22,151	19,006	14,009	13,541
109 Mississippi State U .....	29,616	29,746	25,751	21,426	17,694	13,556	12,387	12,781
110 U of Missouri Columbia .....	29,612	28,047	27,463	24,422	22,312	20,170	20,250	20,068
Total, 1st 110 insts. ....	10,214,366	9,539,610	8,765,141	8,273,530	7,733,866	7,081,508	6,349,901	5,807,411
111 U of South Carolina .....	28,250	23,743	23,084	20,587	17,596	15,655	14,537	14,116
112 George Washington U .....	27,698	28,158	23,715	26,817	25,220	19,888	20,142	17,579 i
113 SUNY Albany .....	27,318	25,988	12,204	14,497	15,171	13,595	13,019	11,662
114 Temple University .....	26,548	26,869	28,873	26,164	25,232	20,137	18,352	18,573
115 University of Delaware .....	26,170	21,629	20,053	17,588	17,083	13,708	13,662	12,578
116 U of Alabama Huntsville .....	24,983	24,432	21,761	21,355	18,001	11,998	7,548	4,442
117 U of Nebraska Lincoln .....	23,930	25,382	27,499	22,686	25,803	25,448	24,512	20,823
118 US Naval Postgrad School ..	23,640	20,171	19,264	17,333	15,170	15,487	12,934	13,006
119 U of New Hampshire .....	23,635	21,591	18,516	14,455	14,594	13,348	12,769	11,113
120 Clemson University .....	23,299	18,771	16,594	14,221	12,484	13,148	9,016	7,550
Total, 1st 120 insts. ....	10,469,837	9,776,344	8,976,704	8,469,233	7,920,220	7,243,920	6,496,392	5,938,853
121 Unif Svcs U of Hlth Sci .....	22,319	20,377 i	18,436 i	16,495 i	14,554 i	12,613	12,076	12,860
122 Rensselaer Polytech Inst .....	22,106	24,313	23,372	22,809	19,143	18,320	14,207	12,996
123 Rice University .....	22,016	21,356	22,838	19,997	16,340	14,300	13,155 i	12,012 i
124 Brandeis University .....	21,825	21,800	21,280	18,819	19,080	18,595	16,857 i	15,119 i
125 U CA Santa Cruz .....	21,821	20,237	15,805	13,855	12,543	12,263	11,432	10,652
126 Med U of South Carolina .....	21,471	17,174	14,367	10,910	11,547	10,956	10,797	10,297
127 University of Oregon .....	21,465	21,002	19,311	20,151	17,286	14,573	12,783	12,918
128 Oklahoma State University ..	20,840	15,384	15,756	17,744	14,116	12,850	9,575	8,502
129 KS St U Agri & App Sci .....	19,582	18,583	15,726	15,651	15,951	14,294	13,270	12,969
130 U CA Riverside .....	19,126	17,167	16,031	15,806	15,584	16,672	15,001	14,626
Total, 1st 130 insts. ....	10,682,408	9,973,737	9,159,626	8,641,470	8,076,364	7,389,356	6,625,545	6,061,804
131 Florida A&M University .....	18,954	18,698	15,592	13,110	10,509	8,674	8,100	7,683 i
132 St Louis University .....	18,583	17,708	16,358	14,106	12,272	8,332	7,783 i	7,236 i
133 Loyola U of Chicago .....	18,230	18,071	14,703	6,203	6,051	4,447	3,804	3,303
134 SUNY Hlth Sci Ctr Brklyn .....	17,916	15,896	17,949	14,574	11,552	10,754	10,494	9,946 i
135 Auburn University .....	17,438	15,415	15,279	14,629	15,179	18,243	13,446	11,893
136 U of Nevada Reno .....	17,097	14,085	10,858	11,922	8,647	9,989	8,033	7,454 i
137 The Medical Col of PA .....	16,990	17,914	14,960	11,704	11,514	9,020	7,449	6,289 i
138 San Diego St University .....	16,862	15,679	16,744	14,647	13,048	12,688	11,386	6,031
139 Syracuse University .....	16,818	14,715	14,192	18,924	20,367	22,377	17,987	15,799
140 U of South Florida .....	16,718	18,010	23,578	30,481	26,576	8,841	7,890	7,344
Total, 1st 140 insts. ....	10,858,014	10,139,928	9,319,839	8,791,770	8,212,079	7,502,721	6,721,917	6,144,782
141 University North Dakota .....	16,467	15,895	14,470	14,398	14,104	12,075	12,515	10,759 i
142 University of Notre Dame .....	16,415	15,058	13,587	12,867	13,209	13,579	10,399	9,984
143 Lehigh University .....	16,038	17,426	11,870	11,242	9,925	10,297	9,679	7,082
144 University of Idaho .....	15,877	16,601	15,149	13,812	12,207	10,970	8,720	8,987
145 Desert Research Institute .....	15,514	11,508	9,795	8,767	8,968	8,088	6,539	5,811
146 Northeastern University .....	15,339	12,841	11,529 i	10,217	10,201	8,966	8,088	7,519
147 University of Mississippi .....	14,917	16,097	16,937	14,973	10,841	9,317	8,247	7,786
148 Howard University .....	14,819	13,976	10,754	13,067	12,146 i	11,227 i	10,308	10,258 e
149 CUNY City College .....	14,785	12,175	11,220	10,554	9,005	8,071	7,552	6,942 i
150 University of Wyoming .....	14,575	13,298	12,782	12,207	13,804	11,136	8,701	9,321
Total, 1st 150 insts. ....	11,012,760	10,284,803	9,447,932	8,913,874	8,326,489	7,606,447	6,812,665	6,229,231

See explanatory information and SOURCE at end of table.



**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
151 U Arkansas Fayetteville .....	14,398	12,421	12,371	10,831	8,955	8,193	7,696	8,612
152 Montana State University .....	14,096	13,443	10,109	9,052	8,781	10,710	8,727i	6,745
153 U of PR Med Sci Campus .....	13,821	14,619	8,610	5,366	5,235	4,218	5,389	5,078i
154 New York Medical College .....	13,468	13,061	11,056	9,028	10,021	11,097	10,038	8,086
155 Rush University .....	12,787	9,130	7,010	6,083	7,582	6,553	7,823	7,191
156 U of Central Florida .....	12,527	9,151	10,406	9,354	11,153	3,476	2,701i	1,926e
157 San Jose State University .....	11,825	8,948	7,978	7,370	7,220	5,944	5,614i	5,284i
158 Drexel University .....	11,335	9,869	7,559	6,761	6,371	6,600	7,870	6,635
159 U Arkansas Med Sci .....	10,964	9,642	7,807	6,654	5,258	5,846	4,561	3,773
160 Texas Tech University .....	10,897	11,121	9,323	9,349	10,939	11,620	11,089	10,501
Total, 1st 160 insts. ....	11,138,878	10,396,208	9,540,161	8,993,722	8,408,004	7,680,704	6,884,173	6,293,062
161 U of Nevada Las Vegas .....	10,585	10,006	17,568	13,270i	8,972i	4,674	3,991i	3,309i
162 Stevens Institute Tech .....	10,552	5,435	3,116	2,960	2,532	2,838	4,100	3,839i
163 Clark Atlanta University .....	10,484	9,985	6,538	6,055i	5,575i	5,095i	4,615i	4,135i
164 Col of William & Mary .....	10,335	8,209	7,283	6,460	5,349	4,942	4,020	4,100
165 Mercer University .....	10,241	7,325	6,388	3,590	1,812	386	381	313
166 U of NE Med Ctr Omaha .....	10,131	9,740	10,518	9,078	8,572	7,765	7,243	6,643
167 Western Illinois U .....	10,096	8,133i	6,170i	4,207i	2,244i	281	256i	232i
168 Wright State University .....	10,081	8,655	8,047	7,426	5,714	5,012	3,695	3,939
169 SUNY Hlth Sci Ctr Syracuse .....	9,878	9,985	10,667	9,965	9,520	7,497	6,427	5,181
170 Michigan Tech University .....	9,777	8,242	6,870	6,045	5,210	6,226	4,757	3,969
Total, 1st 170 insts. ....	11,241,038	10,481,923	9,623,326	9,062,778	8,463,504	7,725,420	6,923,658	6,328,722
171 Eastern Virginia Med Sch .....	9,753	6,966	7,093	7,782	6,887	5,291	2,611	2,092i
172 Hahnemann University .....	9,674	9,797	7,492	8,244	7,809	6,818	6,792	9,094
173 Oregon Grad Inst Sci Tech .....	9,591	7,138	6,962	6,837	6,582	6,513	4,997	4,218i
174 George Mason University .....	9,366	8,439	5,601	2,494	1,171	1,480	571	474i
175 Florida International U .....	9,289	--	--	--	--	--	--	--
176 U TX El Paso .....	9,229	7,433	6,972	5,451	2,561	1,893	2,068	1,493
177 Worcester Polytech Inst .....	9,164	6,018	3,050	2,365	2,411	1,655	1,087	1,191i
178 Meharry Medical College .....	9,074	6,673	7,014	6,391	6,397	5,125	4,414	3,759i
179 U of Maine Orono .....	8,959	8,975	10,062	9,046	8,288	7,048	7,787	8,584
180 University of Louisville .....	8,924	7,267	6,750	8,637	5,953	5,438	4,517	3,227
Total, 1st 180 insts. ....	11,334,061	10,550,629	9,684,322	9,120,025	8,511,563	7,766,681	6,958,502	6,362,854
181 NC A&T State University .....	8,759	8,196	8,205	7,503	5,752	5,717	3,603	4,763
182 North Dakota State U .....	8,756	8,677	7,100	6,417	5,292	4,210	2,870	1,970
183 The University of Alabama .....	8,583	6,877	5,427	6,941	6,542	6,376	5,139	3,455
184 Albany Medical College .....	8,564	6,740	6,291	6,073	7,259	7,915	8,795	8,483i
185 U of PR Mayaguez .....	8,487	9,117	11,727i	14,337	14,114	12,879	8,732	8,183i
186 Med Col of Ohio Toledo .....	8,286	7,083	5,970	5,956	5,855	4,530	5,756	5,450i
187 NJ Inst of Technology .....	8,275	5,778	4,080	2,731	1,082	1,085	847	940
188 U of South Alabama .....	8,270	7,769	7,798	7,237	6,966	5,273	4,715	4,866
189 Boston College .....	8,151	8,695	8,673	6,798	5,824	5,891	4,765	4,550i
190 U TX Dallas .....	8,031	7,676	4,822	5,888	6,812	7,109	7,850	6,029
Total, 1st 190 insts. ....	11,418,223	10,627,237	9,754,415	9,189,906	8,577,061	7,827,666	7,011,574	6,411,543
191 Brigham Young University .....	7,967	8,106	7,082	5,357	4,785	5,660	5,020	4,128i
192 Medical Col of Georgia .....	7,713	7,747	8,081	8,045	7,392	7,621	7,705	7,331
193 University of Denver .....	7,555	7,236	6,484i	7,476	6,825	6,453	8,742	9,518
194 U WI Milwaukee .....	7,455	7,641	6,808	6,715	5,447	4,662	3,939	3,643
195 Sthrn IL U Carbondale .....	7,437	7,382	7,092	8,035	6,571	6,816	6,045	5,644
196 University of Montana .....	7,303	5,024	3,692	3,468	2,771	2,925e	2,572	2,337i
197 Alabama A&M University .....	7,295	5,635	5,481	5,560	4,801	5,121	4,356	3,830i
198 Colorado School of Mines .....	7,050	6,348	6,487	5,310	4,435	4,997	5,146	4,718
199 Old Dominion University .....	6,914	6,284	6,576	7,036	6,175	5,334	4,444	4,297i
200 CUNY Hunter College .....	6,875	5,687	5,524	4,531	4,065	4,223	4,373	4,031
Total, 1st 200 insts. ....	11,491,787	10,694,327	9,817,722	9,251,439	8,630,328	7,881,478	7,063,916	6,461,020

See explanatory information and SOURCE at end of table.

**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
201 Morehouse School of Med ...	6,597	6,155	5,652 i	5,149	4,238	1,815	0	0 i
202 C R Drew U of Med & Sci ...	6,483	5,949	5,311	4,104 i	2,898	2,826	2,913	1,942 i
203 Polytechnic University .....	6,394	5,600	5,600	7,025	6,824	6,561	6,729	5,771
204 Kent State University .....	6,363	5,806	5,171	4,656	2,613	3,027	2,993	2,218
205 U Southern Mississippi .....	6,351	4,820	6,736	3,944	3,588	2,484	1,858	1,311
206 Illinois Inst of Tech .....	6,349	4,165	4,114	3,887	3,947	5,277	6,586	3,986
207 Northern Arizona U .....	6,348	4,180	3,563	2,749	2,683	2,315	1,922	1,101
208 U of Missouri Rolla .....	6,128	4,819	4,360	3,863	3,459	3,670	4,261	3,906
209 U MA Lowell .....	5,959	6,872	6,541	4,662	5,974	5,608	5,087	6,096
210 Georgia State University .....	5,826	4,021	3,516	3,621	2,507	2,340	2,106	1,161
Total, 1st 210 insts. ....	11,554,585	10,746,714	9,868,286	9,295,099	8,669,059	7,917,401	7,098,371	6,488,512
211 Catholic U of America .....	5,796	5,388	6,301	6,783	6,077	5,446	5,061	3,777
212 Clarkson University .....	5,795	4,229	4,229	3,841	4,359	5,141	5,253	4,676
213 Northern Illinois U .....	5,663	5,384	4,617	3,251	2,948	2,360	1,897	1,870
214 Florida Atlantic U .....	5,655	4,431	2,953	2,010	1,295	847	648	659
215 United States Naval Acad ...	5,640	4,969 i	4,302 i	3,635 i	2,968 i	2,301	2,245 i	2,193 i
216 U MD Center for EES .....	5,413	4,321	2,857	2,379	2,519	2,542	2,629	2,227
217 U of Houston Clear Lake .....	5,411	5,033 i	4,659 i	4,285 i	3,911 i	3,537	2,851 i	2,168 i
218 NM Inst Mining & Tech .....	5,373	7,682	6,646 i	5,610	7,183	5,492	8,923	7,130
219 Tennessee State U .....	5,245	4,465	3,701	3,290	3,382	3,382	2,717	2,660
220 Cleveland State U .....	5,187	5,042	4,528	3,695	2,760	2,047	2,019	1,648
Total, 1st 220 insts. ....	11,609,763	10,797,658	9,913,079	9,333,878	8,706,461	7,950,496	7,132,614	6,517,520
221 Ohio University .....	5,168	4,856	4,539	4,140	3,722	3,540	2,828	2,893
222 Tuskegee University .....	5,154	4,498	4,137	4,783	4,967	3,543	2,598	1,689 i
223 Finch U Hlth Sci Chicago .....	5,033	4,167	3,650	3,547	3,269	3,246	2,147	1,784
224 South Dakota State U .....	5,033	4,751	4,102	3,666	3,254	3,343	3,022	3,266
225 SUNY Binghamton .....	5,005	4,611	3,130	3,702	2,914	2,732	2,773	3,341
226 U of Missouri Kansas City ....	4,967	4,419	3,123	2,767	2,391	1,485	812	670
227 Loma Linda University .....	4,963	4,036	2,529	3,349	2,294	3,867	4,801	3,834 i
228 Southern Methodist U .....	4,932	5,138	5,966	11,000 e	6,244	5,315	4,005	3,329 i
229 Prairie View A&M U .....	4,885	4,824	3,373	3,406	3,568	1,560 e	1,334	1,824 i
230 U MD Baltimore County .....	4,845	4,893	4,723	4,147	3,457	3,626	2,743	2,437
Total, 1st 230 insts. ....	11,659,748	10,843,851	9,952,351	9,378,385	8,742,541	7,982,753	7,159,677	6,542,587
231 Southern U All Campuses ....	4,828	4,407	4,332	4,066 i	3,801 e	3,112	2,196	2,715
232 Virginia State University .....	4,761	6,031	5,347	2,744	2,056	2,476	2,326 i	2,176 i
233 U of NC Wilmington .....	4,668	--	--	--	--	--	--	--
234 Hampton University .....	4,597	3,272	3,345	2,307	2,168	--	--	--
235 East Carolina University .....	4,392	3,605	3,612	3,499	2,690	2,668	1,919	2,193
236 University of Akron .....	4,328	4,243	3,411	3,005	2,525	2,199	1,785	1,824
237 U TX Arlington .....	3,995	3,296	2,741	1,795	1,406	2,255	1,667	955
238 San Francisco State U .....	3,964	3,380 i	2,800 i	2,220 i	1,640 i	1,060	1,034	1,646
239 Creighton University .....	3,962	3,478	2,580	2,405	2,386	1,828	1,520 i	1,213 i
240 Portland State University .....	3,869	2,771	2,580	2,693	1,999	1,923	1,999	1,676 i
Total, 1st 240 insts. ....	11,703,112	10,878,334	9,983,099	9,403,119	8,763,212	8,000,274	7,174,123	6,556,985
241 Jackson State University .....	3,831	3,849	3,429	3,381	3,624	2,801	2,040	1,862 i
242 CA St U Long Beach .....	3,830 e	3,830 i	3,830 i	3,830 i	3,830 i	3,830	3,208 i	2,590 i
243 U North TX Health Sci Ctr .....	3,753	2,804	3,135	2,031	2,518	2,508	2,381	1,914
244 University of Toledo .....	3,727	3,304	2,997	2,101	1,966	1,894	1,583 i	1,273
245 Texas Southern U .....	3,652	2,028	1,810	1,363	1,293	1,419	1,263 i	1,107 i
246 U of PR Rio Piedras .....	3,616	2,626	2,860	2,980	2,855	3,662	3,217	2,927 i
247 American University .....	3,569	3,926	4,426	3,532	3,480	3,623	2,980	2,425 i
248 Memphis State University ....	3,504	3,586	2,954	2,666	2,299	1,647	1,268	908
249 Air Force Inst of Tech .....	3,252	3,813	2,243	2,200	1,800 i	1,400	456	370 i
250 SUNY Col Env Sci & Frstry ..	3,177	2,427	2,126	1,973	1,883	1,669	1,209	1,379 i
Total, 1st 250 insts. ....	11,739,023	10,910,527	10,012,909	9,429,176	8,788,760	8,024,727	7,193,728	6,573,740

See explanatory information and SOURCE at end of table.

**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
251 CA St U Los Angeles .....	3,147	2,932i	2,717i	2,502i	2,287i	2,072	1,864i	1,660i
252 Xavier University of LA .....	3,145	2,365	2,424	1,902	1,294	--	--	--
253 Alcorn State University .....	3,038	2,132	1,665	1,487	1,850	1,692i	1,623i	1,554i
254 Oakland University .....	3,026	3,013	2,852	1,882	2,767	2,475	3,035	2,747i
255 Gallaudet University .....	2,944	2,755i	2,566i	2,377i	2,188i	1,999	2,023i	2,046i
256 Lincoln University .....	2,726	2,851	2,763	2,600	2,706	--	--	--
257 Texas Christian U .....	2,693	2,765	2,430	1,362	488	302	493	636
258 U MD Eastern Shore .....	2,691	3,096	1,371	1,552	2,203	1,736	1,522	1,606
259 Wesleyan University .....	2,611	2,588	1,458	1,949	2,193	2,007	1,890	1,841
260 Marquette University .....	2,524	2,612	2,068	1,855	1,487	1,671	1,080	965
Total, 1st 260 insts. ....	11,767,568	10,937,636	10,035,223	9,448,644	8,808,223	8,038,681	7,207,258	6,586,795
261 South Carolina State Col .....	2,460	2,075	1,309	1,308	1,014i	721	810i	899i
262 Ponce School of Medicine ...	2,436	1,573	1,347	919	782	642	602	607
263 Fort Valley State College .....	2,413	2,384	2,047	1,938	1,741	--	--	--
264 CUNY Grad Sch & U Ctr .....	2,386	2,811	2,161	2,990	2,112	1,690	1,848	1,833
265 Western Michigan U .....	2,383	1,436	845	585	488i	391	227	306
266 Kentucky State University ....	2,349	2,525	2,026	2,856	1,721	1,697	1,827	1,636i
267 Miami University (OH) .....	2,343	1,918	2,050	1,365	1,659	1,479i	1,301i	1,123i
268 University of Tulsa .....	2,337	1,369	1,264	1,037	926	911	823i	736i
269 SD Sch of Mines & Tech .....	2,328	2,362	2,056	2,268	2,128	1,815	1,462	1,251
270 Wichita State University .....	2,315	2,575	1,768	1,041	1,921	3,228	1,175	746
Total, 1st 270 insts. ....	11,791,318	10,958,664	10,052,096	9,464,951	8,822,715	8,051,255	7,217,333	6,595,932
271 U of NC Charlotte .....	2,307	2,208	1,226	1,327	817	483	434i	386i
272 U of the Virgin Islands .....	2,283	2,403i	2,521i	2,639e	2,600	2,578	1,447e	1,043
273 University of North Texas .....	2,277	1,932	1,942	1,974	2,813	2,828	3,022	2,506
274 U TX San Antonio .....	2,185	--	--	--	--	--	--	--
275 U Arkansas Pine Bluff .....	2,164	2,372	2,176	1,188	1,148	1,199	1,047	1,010
276 Lamar University .....	2,158	2,046	1,914	1,317	388	2	64	58
277 Southwest Texas St U .....	2,151	1,720i	1,290i	860i	430i	0	10i	20i
278 U MA Boston .....	2,133	2,019	--	--	--	--	--	--
279 U of NC Greensboro .....	1,963	1,800	1,666	806	596	278	370	256
280 US Air Force Academy .....	1,956	1,564i	1,173i	782i	391i	0	0	0
Total, 1st 280 insts. ....	11,812,895	10,976,728	10,066,004	9,475,844	8,831,898	8,058,623	7,223,727	6,601,211
281 CUNY Queens College .....	1,911	1,787	1,989	1,987	1,919	1,612	1,461i	1,312i
282 Florida Inst of Tech .....	1,903	2,080	1,640	1,251	898	552	577	656
283 Illinois State University .....	1,839	1,470	1,241	1,193	973	1,011	854	642
284 U of Missouri St Louis .....	1,818	1,495	1,046	1,167	1,430	779	698	913
285 University of DC .....	1,808i	1,600	1,585	1,455	1,330i	1,205	738	1,706
286 U MA Dartmouth .....	1,802	1,425	--	--	--	--	--	--
287 Clark University .....	1,717	1,121	936	919	794	820	942	1,139i
288 Bowling Green State U .....	1,686	1,496	1,602	1,882	1,770	1,475	1,037	1,338
289 CA St U Northridge .....	1,634	--	--	--	--	--	--	--
290 Wentworth Inst of Tech .....	1,634	1,287	1,460	1,435	1,383	1,457	1,431i	1,405i
Total, 1st 290 insts. ....	11,830,647	10,990,489	10,077,503	9,487,133	8,842,395	8,067,534	7,231,465	6,610,322
291 Embry Riddle Aeronauticl U ..	1,614	--	--	--	--	--	--	--
292 Langston University .....	1,570	1,446	1,310	1,200	1,961	--	--	--
293 University of Guam .....	1,567e	1,528i	1,495i	1,462i	1,429i	1,396i	1,363i	1,330i
294 Rochester Inst of Tech .....	1,561	1,341i	1,124i	907i	690i	473	406i	339i
295 MT Col of Min Sci & Tech ....	1,537	1,327i	1,121i	915i	709i	503	566i	628i
296 Occidental College .....	1,513e	908	381	300	442	376	334i	296i
297 U of South Dakota .....	1,511	981	759	940	784	685	645i	605i
298 Wellesley College .....	1,464e	1,464i	1,464i	1,464i	1,464i	1,464	1,128	921i
299 Morgan State University .....	1,456	1,179	683	655	638	742e	346	860
300 U Ctrl Del Caribe Esc Med ...	1,426	1,100	617	546	640	525	577	809
Total, 1st 300 insts. ....	11,845,866	11,001,763	10,086,457	9,495,522	8,851,152	8,073,698	7,236,830	6,616,110

See explanatory information and SOURCE at end of table.

**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
301 Fisk University .....	1,418	1,235	616	1,156	1,131	1,379	777	661 i
302 Northeast Louisiana U .....	1,391	2,112	663	675	56	35	25	6
303 CUNY Brooklyn College .....	1,373	1,454 i	1,533 i	1,612 i	1,691 i	1,770	1,668 i	1,566 i
304 U WI Superior .....	1,338	1,243	1,402	1,550	1,495	1,309	1,414	1,253
305 Inst Paper Sci and Tech .....	1,311	1,317	1,408	965	1,382	1,049	1,469	867
306 SUNY Col Buffalo .....	1,290	1,157	1,000	520	583 i	641 i	699 i	757 i
307 Bryn Mawr College .....	1,277	801	976	1,252	536	687	696	435
308 Central State University .....	1,272	930	680	2,323	449	--	--	--
309 Tennessee Tech U .....	1,266	1,534	949	1,286	743	731	711	606 i
310 Delaware State University ....	1,262	1,253	915	920	920	--	--	--
Total, 1st 310 insts. ....	11,859,064	11,014,799	10,096,599	9,507,781	8,860,138	8,081,299	7,244,289	6,622,261
311 Morris Brown College .....	1,227	1,217 e	442	464 e	164	--	--	--
312 Idaho State University .....	1,149	742	532	549	378	226	268	341
313 Loyola College .....	1,131	--	--	--	--	--	--	--
314 U of Southwestern LA .....	1,130	1,007	929	874	818	863	589	518 i
315 Morehouse College .....	1,117	1,214	917	868	997	--	--	--
316 Hofstra University .....	1,073	211	418	445	256	91	215	201
317 Albany State College .....	1,068	627	536	516	653	348	263 e	207 i
318 Chicago State University .....	1,048	936 i	827 i	718 i	609 i	500	473 i	449 i
319 University of the Pacific .....	1,043	995	1,039	897	990	941 i	894 i	847 i
320 Amherst College .....	1,039	933	1,132	1,233	1,047	1,091	1,015 i	942 i
Total, 1st 320 insts. ....	11,870,089	11,022,681	10,103,371	9,514,345	8,866,050	8,085,359	7,248,006	6,625,766
321 U of Southern Colorado .....	1,031	--	--	--	--	--	--	--
322 CA St U Fullerton .....	1,028 e	1,028 i	1,028 i	1,028 i	1,028 i	1,028	708	611 i
323 Texas A&M U Kingsville .....	1,019	996	664	661	1,118	847	742 i	640 i
324 Williams College .....	1,010	925 i	841 i	757 i	673 i	589	538 i	488 i
325 Barnard College .....	1,007	869	540	546	665	587	542 i	499 i
326 Fordham University .....	1,006	1,468	1,303	1,723	2,063	1,752	1,805	1,525 i
327 Saginaw Valley St U .....	1,003	--	--	--	--	--	--	--
328 University of Scranton .....	992	--	--	--	--	--	--	--
329 Villanova University .....	980	882	708	943	885	223	459	366 i
330 U of Texas Pan American ....	956	883 i	811 i	739 i	667 i	595	565 i	539 i
Total, 1st 330 insts. ....	11,880,121	11,029,732	10,109,266	9,520,742	8,873,149	8,090,980	7,253,365	6,630,434
331 U WI Stout .....	954	1,174	1,173	121	39	82	63 i	48 i
332 CA St Poly U Pomona .....	918	1,258	997	366	362	503	422 i	345 i
333 CUNY York College .....	905	872	622	655	754	673	559	634 i
334 U of Houston Downtown .....	900	--	--	--	--	--	--	--
335 DePaul University .....	893	594	507	623	772	468	189	142 i
336 Trinity University .....	858	769 i	684 i	599 i	514 i	429	371	326
337 Phila Col Osteopathic Med ..	830	314	198 i	83	302	179	168	71
338 Nova University .....	805	974	1,395	1,341	981	839	779	632 i
339 Eastern Washington U .....	804	669	791	1,061	738	532	488	559
340 Manhattan College .....	804	906 i	1,003 i	1,100 i	1,197 i	1,294 i	1,391	1,312
Total, 1st 340 insts. ....	11,888,792	11,037,262	10,116,636	9,526,691	8,878,808	8,095,979	7,257,795	6,634,503
341 Alfred University .....	797	403	320	344	449	285	382	349
342 East Tennessee State U .....	791	886	1,060	1,219	919	447	486	427 i
343 Georgia Southern U .....	778	660 i	544 i	428 i	312 i	196	222 i	247 i
344 U of Detroit Mercy .....	770	318	309	245	55	34	82 i	129 i
345 SUNY Col Plattsburgh .....	741	924	1,027	930	755	912	742	469
346 CA Poly St U San Luis Ob ...	729	579	534	496	475	653	586 i	523 i
347 CUNY Col Staten Island .....	705	615	634	576	579	371	334 i	301 i
348 Canisius College .....	699	734	221	524	194	279	243 i	211 i
349 Texas Woman's University ..	692	563	466	476	325	243	173	209
350 Louisiana Tech University ....	687	1,660	1,072	2,629	2,842	760	828	745 i
Total, 1st 350 insts. ....	11,896,181	11,044,624	10,122,823	9,534,558	8,885,713	8,100,159	7,261,873	6,638,113

See explanatory information and SOURCE at end of table.

**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
351 Augsburg College .....	678	620	382	139	115	90	80i	71i
352 Ntheastrn OH U Col Med .....	652	936	724	708	811	719	612	681
353 CA St U Fresno .....	650	564i	479i	394i	309i	224	195i	170i
354 Tougaloo College .....	636	702	684	566	787	--	--	--
355 Central Michigan U .....	628	734	110	60	179	276	134	110
356 Haverford College .....	613e	613i	613i	613i	613i	613	552i	496i
357 Ball State University .....	606	330	226	153	178	197	317	293
358 Elizabeth City State U .....	605	339	0	15	26	--	--	--
359 Benedict College .....	600	702	0	0	0	--	--	--
360 Swarthmore College .....	592	633i	670i	707i	744i	781	636i	491i
Total, 1st 360 insts. ....	11,902,441	11,050,797	10,126,711	9,537,913	8,889,475	8,103,059	7,264,399	6,640,425
361 St John's University (NY) .....	590	743	528	519	361	308	290i	274i
362 National Hispanic U .....	585	--	--	--	--	--	--	--
363 Marshall University .....	570	623	883	1,244	1,647	1,484	901	818
364 Tarleton State University .....	570	12	370	88	0	0	0	0i
365 Spelman College .....	569	514	358	348	272	--	--	--
366 Norfolk State University .....	566	769	726	825	648	400	266	456
367 U of West Florida .....	564	569	468	213	327	436	709i	982i
368 Middlebury College .....	559	484i	409i	334i	259i	184	161i	138i
369 Northern Marianas College .....	559	--	--	--	--	--	--	--
370 Hampshire College .....	558	--	--	--	--	--	--	--
Total, 1st 370 insts. ....	11,908,131	11,054,511	10,130,453	9,541,484	8,892,989	8,105,871	7,266,726	6,643,093
371 Boise State University .....	557	--	--	--	--	--	--	--
372 College of the Holy Cross .....	545	473i	402i	331i	260i	189	180i	172i
373 Baylor Col of Dentistry .....	537	437	696	682	641	525	450	407
374 Franklin & Marshall Col .....	536	514i	495i	476i	457i	438	247	214i
375 Winston Salem State U .....	529	583	617	532	650	--	--	--
376 Alabama State University .....	528	502	442	403	456	--	--	--
377 CA St U Dominguez Hills .....	522	--	--	--	--	--	--	--
378 Hope College .....	520	--	--	--	--	--	--	--
379 U of Charleston SC .....	517	--	--	--	--	--	--	--
380 Vassar College .....	517	522i	524i	526i	528i	530	400	424i
Total, 1st 380 insts. ....	11,913,439	11,057,542	10,133,629	9,544,434	8,895,981	8,107,553	7,268,003	6,644,310
381 Western Kentucky U .....	514	429i	347i	265i	183i	101	131i	158i
382 U of Nebraska Omaha .....	507	540	294	187	62	56	75	24
383 Fort Lewis College .....	494	--	--	--	--	--	--	--
384 U of Northern Iowa .....	485	108	58	136	108	91	74i	59i
385 University San Francisco .....	484	455i	426i	397i	368i	339	333i	331i
386 Bridgewater State College .....	479	400i	323i	246i	169i	92	72i	54i
387 PA College of Optometry .....	479	--	--	--	--	--	--	--
388 Bowie State University .....	465	425	234	35	0	--	--	--
389 James Madison University .....	461	393i	327i	261i	195i	129	105i	82i
390 Pomona College .....	455	358	263	266	370	358	435i	512i
Total, 1st 390 insts. ....	11,918,262	11,060,650	10,135,901	9,546,227	8,897,436	8,108,719	7,269,228	6,645,530
391 Radcliffe College .....	453	--	--	--	--	--	--	--
392 Central Washington U .....	450	385i	321i	257i	193i	129	118i	111i
393 Union College (NY) .....	444	279	261i	247i	233i	219i	205i	191i
394 Lincoln University (PA) .....	432	953	437	632	692e	789	591i	394i
395 Santa Clara University .....	422	459	408	550	672	712	746e	642
396 Selma University .....	420	798	650	790	816	--	--	--
397 Knox College .....	416	550	358	298i	239	164	145i	126i
398 CUNY Jay Col Crim Just .....	412	--	--	--	--	--	--	--
399 Eastern Michigan U .....	408	400i	395i	390i	385i	380	329i	279i
400 Baylor University .....	407	635	324	369	346	353	329	263i
Total, 1st 400 insts. ....	11,922,526	11,065,109	10,139,055	9,549,760	8,901,012	8,111,465	7,271,691	6,647,536

See explanatory information and SOURCE at end of table.



**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
401 SUNY Col Old Westbury .....	400	--	--	--	--	--	--	--
402 Mount Holyoke College .....	399e	399i	399i	399i	399i	399	305i	211
403 U WI Stevens Point .....	399	234	128	167	226	180	208i	236i
404 West Chester U of PA .....	398	346i	296i	246i	196i	146	116i	87i
405 U of Southern Maine .....	392e	--	--	--	--	--	--	--
406 Indiana State University .....	391	498	307	314	340	340	184	203
407 University of Richmond .....	390	--	--	--	--	--	--	--
408 Reed College .....	385	404i	422i	440i	458i	476	433i	392i
409 Sam Houston State U .....	380	220	229	93	84	73	115	114
410 Eastern Kentucky U .....	379	--	--	--	--	--	--	--
Total, 1st 410 insts. ....	11,926,439	11,067,210	10,140,836	9,551,419	8,902,715	8,113,079	7,273,052	6,648,779
411 Johnson C Smith U .....	377	276	454	467	480	--	--	--
412 New Sch for Socl Res .....	376	376	344	293	251	384	422	298i
413 Humboldt St University .....	374e	374i	374i	374i	374i	374	358i	346i
414 Kirkville Col Osteo Med .....	369	392	254	198	306	517i	727	641i
415 Hamilton College .....	359	--	--	--	--	--	--	--
416 Monmouth College (NJ) .....	357e	141e	135	46	100	0	0i	0i
417 CUNY Bernard Baruch Col ..	354	223	344	207	287	125	125i	125i
418 Harvey Mudd College .....	352	392i	429i	466i	503i	540	597	636
419 Simmons College .....	350	318i	294i	270i	246i	222i	198i	174i
420 Winthrop University .....	350	280i	211i	142i	73i	4	22i	36i
Total, 1st 420 insts. ....	11,930,057	11,069,982	10,143,675	9,553,882	8,905,335	8,115,245	7,275,501	6,651,035
421 Rust College .....	346	798	271	156	214	--	--	--
422 U Osteo Med & Hlth Sci .....	343	0	0	43	86	88	0	0i
423 Carleton College .....	336	381i	424i	467i	510i	553	440i	330i
424 Jarvis Christian College .....	336	97	60	75	60	--	--	--
425 John Carroll University .....	332	286i	242i	198i	154i	110	104	96i
426 Smith College .....	332i	312i	291i	298	903	411	375i	339i
427 Stephen F Austin St U .....	330	292	282	289	332	283	233	308i
428 Murray State University .....	325	281i	240i	199i	158i	117	158i	197i
429 SUNY Col Geneseo .....	317	245	135	200	151	173	142i	111i
430 Strn IL U Edwardsville .....	317	324i	329i	334i	339i	344	300i	259i
Total, 1st 430 insts. ....	11,933,371	11,072,998	10,145,949	9,556,141	8,908,242	8,117,324	7,277,253	6,652,675
431 Western Washington U .....	315e	315i	315i	315i	315i	315	277	268i
432 North Carolina Central U .....	313	683	441i	199	422e	350	317i	286i
433 U WI River Falls .....	312	268	118	27	43	35	28i	23i
434 Southwest Missouri St U .....	311	334i	355i	376i	397i	418	354i	293i
435 U WI Parkside .....	310	413	362	581	651	497	465i	433i
436 US Coast Guard Academy ..	310	281i	252i	223i	194i	165e	150i	140i
437 Midwestern University .....	303	149	175	318	314	526	419	119
438 University of San Diego .....	302	--	--	--	--	--	--	--
439 SUNY Col Oswego .....	299	188	75	71	76	58	236	229i
440 Duquesne University .....	297	202	250	216	68	68	68	54i
Total, 1st 440 insts. ....	11,936,443	11,075,831	10,148,292	9,558,467	8,910,722	8,119,756	7,279,567	6,654,520
441 Trinity College .....	292	290i	288i	286i	284i	282	244i	209i
442 Bucknell University .....	291	250i	210i	170i	130i	90	87i	86i
443 CA St U Bakersfield .....	291	--	--	--	--	--	--	--
444 Evergreen State College .....	288	--	--	--	--	--	--	--
445 U of NC Asheville .....	286	--	--	--	--	--	--	--
446 York Technical College .....	285	--	--	--	--	--	--	--
447 Appalachian State U .....	284	--	--	--	--	--	--	--
448 Lafayette College .....	283	--	--	--	--	--	--	--
449 New Mexico Highlands U .....	283	247i	211i	175i	139i	103	169i	231i
450 Augustana College .....	281	254i	228i	202i	176i	150	121i	92i
Total, 1st 450 insts. ....	11,939,307	11,076,872	10,149,229	9,559,300	8,911,451	8,120,381	7,280,188	6,655,138

See explanatory information and SOURCE at end of table.

**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
451 Pitzer College .....	280	--	--	--	--	--	--	--
452 Fayetteville State U .....	273	187	275	154	258	--	--	--
453 CA St U Chico .....	270	222i	174i	126i	78i	30	267	179
454 Southern Connecticut St U ..	268	--	--	--	--	--	--	--
455 St Mary's U San Antonio .....	264	261i	260i	259i	258i	257	227i	202i
456 Calvin College .....	262	--	--	--	--	--	--	--
457 Allegheny College .....	258	--	--	--	--	--	--	--
458 Virginia Military Inst .....	252	224i	199i	174i	149i	124	127i	128i
459 Ohio Wesleyan University .....	245	--	--	--	--	--	--	--
460 U WI Oshkosh .....	245	213	280	238	161	147	127i	109i
Total, 1st 460 insts. ....	11,941,924	11,077,979	10,150,417	9,560,251	8,912,355	8,120,939	7,280,936	6,655,756
461 Northern Kentucky U .....	244	--	--	--	--	--	--	--
462 Pittsburg State U .....	220	195i	170i	145i	120i	95	76i	57i
463 Bethune Cookman College ..	218	590	548	494	420	--	--	--
464 Abilene Christian U .....	216	162	125	103	89	66	56i	47i
465 Mississippi Valley St U .....	213	71	64	43	14	31	0	0i
466 U WI La Crosse .....	211	315	258	185	108	79	116	70
467 Linfield College .....	204	160i	120i	80i	40i	0	7i	9i
468 Wilberforce University .....	200	--	--	--	--	--	--	--
469 Indiana U of PA All Cmp .....	196	--	--	--	--	--	--	--
470 Saint Cloud State U .....	195	201i	206i	211i	216i	221	180i	139i
Total, 1st 470 insts. ....	11,944,041	11,079,673	10,151,908	9,561,512	8,913,362	8,121,431	7,281,371	6,656,078
471 Drake University .....	191	63	61	3	12	21	26i	30i
472 Mankato State University .....	187	158i	130i	102i	74i	46	58i	66i
473 Oakwood College .....	186	206	179	226	0	--	--	--
474 U of Northern Colorado .....	185	158	91	54	66	0	10	0
475 Kenyon College .....	181	--	--	--	--	--	--	--
476 Claflin College .....	180	240	381	203	0e	--	--	--
477 Whitman College .....	180	--	--	--	--	--	--	--
478 Furman University .....	179	175i	171i	167i	163i	159	52	63i
479 St Olaf College .....	179	179	142	151	97	153	166i	178i
480 U WI Eau Claire .....	179	178	126	268	355	254	218i	182i
Total, 1st 480 insts. ....	11,945,868	11,081,030	10,153,189	9,562,686	8,914,129	8,122,064	7,281,901	6,656,597
481 SUNY Col Cortland .....	173	113	88	75	102	78	67i	58i
482 SUNY Col Brockport .....	171	165	425	297	230	155	144i	135i
483 Seton Hall University .....	171i	164i	153i	183i	213i	243i	273i	303i
484 Towson State University .....	171	151i	132i	113i	94i	75	95	47
485 Savannah State College .....	168	195	212	221	179	--	--	--
486 SUNY Col of Optometry .....	164	160	118	294	292	286	398	344i
487 West Virginia State Col .....	161	172	210	138	75	--	--	--
488 Phila Col of Phar & Sci .....	160	279	368	381	288	49	47	83
489 Connecticut College .....	158	164i	169i	174i	179i	184	87	70i
490 Lawrence University .....	157	145i	134i	123i	112i	101	80i	60i
Total, 1st 490 insts. ....	11,947,522	11,082,738	10,155,198	9,564,685	8,915,893	8,123,235	7,283,092	6,657,697
491 Philander Smith College .....	157	136	154	120	154	--	--	--
492 Grambling State U .....	155	164i	173i	182	106	64	128	131i
493 U WI Green Bay .....	152	184	198	267	252	165	212i	258i
494 College of Wooster .....	151	136i	124i	112i	100i	88	85i	82i
495 La Salle University .....	143	--	--	--	--	--	--	--
496 Bowdoin College .....	142e	142i	142i	142i	142i	142	143i	143i
497 Western Maryland College ..	142	--	--	--	--	--	--	--
498 New York Inst Technology ..	141	94i	47i	0	0	352	373	442i
499 Denison University .....	140	152i	160i	168i	176i	184	199i	210i
500 Beloit College .....	136	120i	108i	96i	84i	72	63i	55i
Total, 1st 500 insts. ....	11,948,981	11,083,866	10,156,304	9,565,772	8,916,907	8,124,302	7,284,295	6,659,018

See explanatory information and SOURCE at end of table.

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**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
501 Saint Joseph's University .....	135	120i	105i	90i	75i	60	70i	75i
502 Moorhead State University .....	133	114i	96i	78i	60i	42	35i	28i
503 Rose Hulman Inst of Tech .....	132	--	--	--	--	--	--	--
504 Ithaca College .....	126	147i	164i	181i	198i	215	187i	161i
505 Drew University .....	125	--	--	--	--	--	--	--
506 Macalester College .....	125	100i	75i	50i	25i	0	0i	0i
507 Marietta College .....	125	--	--	--	--	--	--	--
508 Lewis and Clark College .....	123	--	--	--	--	--	--	--
509 Bennett College .....	122	784	62	358	229	--	--	--
510 Kennesaw State College .....	121	--	--	--	--	--	--	--
Total, 1st 510 insts. ....	11,950,248	11,085,131	10,156,806	9,566,529	8,917,494	8,124,619	7,284,587	6,659,282
511 GMI Eng & Mgmt Inst .....	120	--	--	--	--	--	--	--
512 University Saint Thomas .....	120	--	--	--	--	--	--	--
513 Millersville U of PA .....	118	--	--	--	--	--	--	--
514 Valdosta State University .....	118	--	--	--	--	--	--	--
515 Col of St Scholastica .....	117	--	--	--	--	--	--	--
516 Grinnell College .....	117	109i	104i	99i	94i	89	95i	95i
517 Ouachita Baptist U .....	117	--	--	--	--	--	--	--
518 Antioch University .....	116	87	0	0	0	0	1i	2i
519 Whitworth College .....	113	--	--	--	--	--	--	--
520 Bates College .....	112	--	--	--	--	--	--	--
Total, 1st 520 insts. ....	11,951,416	11,085,327	10,156,910	9,566,628	8,917,588	8,124,708	7,284,683	6,659,379
521 Long Island University .....	109	142	20	57	191	346	247	64
522 Southern Col of Optometry .....	109	--	--	--	--	--	--	--
523 CA St U San Bernardino .....	108	84i	63i	42i	21i	0	6	36
524 Fairfield University .....	105	88i	71i	54i	37i	20	21i	22i
525 East Stroudsburg U of PA .....	100	100	120	0	165	107	90i	75i
526 Valparaiso University .....	100e	100i	100i	100i	100i	100	0	95
527 SUNY Col Fredonia .....	98	116	27	59i	90i	121	101i	83i
528 Davidson College .....	97	--	--	--	--	--	--	--
529 Adelphi University .....	95i	89	152	216i	280	192i	105	138i
530 Southeast Missouri St U .....	95	--	--	--	--	--	--	--
Total, 1st 530 insts. ....	11,952,432	11,086,046	10,157,463	9,567,156	8,918,472	8,125,594	7,285,253	6,659,892
531 Regis University .....	93	--	--	--	--	--	--	--
532 Goucher College .....	91	29	54	32	27	25	33i	37i
533 Iona College .....	91	--	--	--	--	--	--	--
534 Siena College .....	90	--	--	--	--	--	--	--
535 Youngstown State U .....	90	102i	111i	120i	129i	138	120	120
536 Gustavus Adolphus Col .....	85	--	--	--	--	--	--	--
537 Kalamazoo College .....	84	--	--	--	--	--	--	--
538 Southern Oregon State Col ..	83	72	56	43	56	0	0	0
539 Western Carolina U .....	83	--	--	--	--	--	--	--
540 Andrews University .....	82	98	101	96	24	23e	20i	19i
Total, 1st 540 insts. ....	11,953,304	11,086,347	10,157,785	9,567,447	8,918,708	8,125,780	7,285,426	6,660,068
541 Colby College .....	82	--	--	--	--	--	--	--
542 Colorado College .....	81	59	34	5	0	0	11i	16i
543 Bentley College .....	80	--	--	--	--	--	--	--
544 Fuller Theological Sem .....	80	40	0	0	3	0	0	9
545 U WI Whitewater .....	80	65	31	42	107	37	28i	21i
546 Washington and Lee U .....	79	69i	63i	57i	51i	45	45	35
547 Edinboro U of PA .....	78	60i	45i	30i	15i	0	0i	0i
548 Saint John's University .....	78	--	--	--	--	--	--	--
549 Coppin State College .....	77	103	212	387	388	--	--	--
550 Southeastern Louisiana U .....	77	--	--	--	--	--	--	--
Total, 1st 550 insts. ....	11,954,096	11,086,743	10,158,170	9,567,968	8,919,272	8,125,862	7,285,510	6,660,149

See explanatory information and SOURCE at end of table.

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**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
551 CA Sch Prof Psy Fresno .....	74	252	208	985	1,566	940	476	238 i
552 Columbia Union College .....	73	--	--	--	--	--	--	--
553 King's College .....	73	--	--	--	--	--	--	--
554 CA St U Sacramento .....	72	--	--	--	--	--	--	--
555 Bradley University .....	71	65 i	59 i	53 i	47 i	41	51 i	56 i
556 California U of PA .....	68	52 i	40 i	28 i	16 i	4	0 i	0 i
557 Central Connecticut St U .....	68	--	--	--	--	--	--	--
558 Hartwick College .....	68	--	--	--	--	--	--	--
559 SUNY Col Purchase .....	67	--	--	--	--	--	--	--
560 CUNY NY City Tech Col .....	66	--	--	--	--	--	--	--
Total, 1st 560 insts. ....	11,954,796	11,087,112	10,158,477	9,569,034	8,920,901	8,126,847	7,286,037	6,660,443
561 U of Central Oklahoma .....	66	52 i	39 i	26 i	13 i	0	0 i	0 i
562 Henderson State U .....	65	52 i	39 i	26 i	13 i	0	0 i	0 i
563 Montclair State U .....	65	128	4	0	0	8 i	9 i	10 i
564 New England Col Opt .....	65	--	--	--	--	--	--	--
565 Seattle University .....	64	43	88	52	74	64	0	5 i
566 Loyola U of New Orleans .....	62	57 i	54 i	51 i	48 i	45	36 i	27 i
567 Northern Michigan U .....	60	51 i	42 i	33 i	24 i	15	16 i	17 i
568 Eastern NM U All Cmp .....	58	81 i	104 i	127 i	150 i	173	173	9
569 Northeast Missouri St U .....	58	52	26	18	122	38	50	25 i
570 University of Puget Sound ...	57e	57 i	57 i	57 i	57 i	57	44 i	33 i
Total, 1st 570 insts. ....	11,955,416	11,087,685	10,158,930	9,569,424	8,921,402	8,127,247	7,286,365	6,660,569
571 Butler University .....	55	--	--	--	--	--	--	--
572 Morehead State University ...	55	47 i	39 i	31 i	23 i	15	12 i	9 i
573 Providence College .....	55	47	65	0	0	0	0	0 i
574 Claremont Graduate Sch .....	53	15	66	47	106	337	343	354 i
575 Fairleigh Dickinson U .....	53	2	370	2,364	2,355	3,274	2,402	1,501
576 Shaw University .....	53	6	0	0	0	--	--	--
577 Notre Dame College .....	51	--	--	--	--	--	--	--
578 Rhodes College .....	51	--	--	--	--	--	--	--
579 Western State College .....	51	44 i	39 i	34 i	29 i	24	0	0 i
580 Cooper Union .....	50	39 i	30 i	21 i	12 i	3	28 i	51 i
Total, 1st 580 insts. ....	11,955,943	11,087,885	10,159,539	9,571,921	8,923,927	8,130,900	7,289,150	6,662,484
581 University of New Haven .....	49	--	--	--	--	--	--	--
582 SUNY Col Potsdam .....	48	74	11	22	27	11	25 i	33 i
583 University of Portland .....	48	198	121	311	0	200	160 i	120 i
584 Sul Ross State University ...	47	38	71	171	98	107	96 i	87 i
585 Kutztown U of PA .....	46	126	43	37	37	31	35 i	39 i
586 Lawrence Tech University ....	45	--	--	--	--	--	--	--
587 Westminster College .....	44	--	--	--	--	--	--	--
588 Arkansas Tech University ....	43	--	--	--	--	--	--	--
589 Point Loma Nazarene Col ....	43	--	--	--	--	--	--	--
590 Augustana College .....	42	45 i	48 i	51 i	54 i	57	44 i	34 i
Total, 1st 590 insts. ....	11,956,398	11,088,366	10,159,833	9,572,513	8,924,143	8,131,306	7,289,510	6,662,797
591 Elizabethtown College .....	42	--	--	--	--	--	--	--
592 East Texas State U .....	39	0	85	113	89	1	12	8
593 West Georgia College .....	39	32 i	26 i	20 i	14 i	8	12	22
594 Middle Tennessee State U ...	36	--	--	--	--	--	--	--
595 Quinnipiac College .....	35e	73 i	107 i	141 i	175 i	209	164 i	123 i
596 Arkansas State University ....	33	8	23	119	83	46	61 i	73 i
597 Western Oregon State Col ...	33	24 i	18 i	12 i	6 i	0	2 i	3 i
598 Bloomsburg U of PA .....	31	--	--	--	--	--	--	--
599 SUNY Col New Paltz .....	31	71	153	112	54	1	103	85 i
600 Saint Mary's Col of MN .....	30	35 i	40 i	45 i	50 i	55	41 i	31 i
Total, 1st 600 insts. ....	11,956,747	11,088,609	10,160,285	9,573,075	8,924,614	8,131,626	7,289,905	6,663,142

See explanatory information and SOURCE at end of table.

**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
601 Eckerd College .....	29	--	--	--	--	--	--	--
602 Hendrix College .....	27	--	--	--	--	--	--	--
603 Illinois Benedictine Col .....	27	20i	15i	10i	5i	0	8i	16i
604 University of Bridgeport .....	27	--	--	--	--	--	--	--
605 Emporia State University .....	26	20i	15i	10i	5i	0	1i	1i
606 McNeese State University .....	26	62i	98i	134i	170i	206i	242	1,148
607 West Texas A&M U .....	25	16	12	40	120	124	177	66
608 Juniata College .....	23	--	--	--	--	--	--	--
609 Knoxville College .....	23i	33i	42i	46i	50	--	--	--
610 Carroll College .....	22	--	--	--	--	--	--	--
Total, 1st 610 insts. ....	11,957,002	11,088,760	10,160,467	9,573,315	8,924,964	8,131,956	7,290,333	6,664,373
611 Wheeling Jesuit College .....	20	--	--	--	--	--	--	--
612 Clarion University of PA .....	19	12i	9i	6i	3i	0	1i	2i
613 Western New England Col .....	19	--	--	--	--	--	--	--
614 Austin College .....	15	12i	9i	6i	3i	0	1i	2i
615 Saint Joseph College .....	14	20i	23i	26i	29i	32	24i	18i
616 Central Missouri St U .....	13	--	--	--	--	--	--	--
617 Rollins College .....	13	22i	29i	36i	43i	50	2	0
618 Milwaukee School of Eng .....	10	87	0	0	0	0	0i	0i
619 Webb Inst Naval Archit .....	8	10i	11i	12i	13i	14	40i	62i
620 U of Alaska Southeast .....	4	--	--	--	--	--	--	--
Total, 1st 620 insts. ....	11,957,137	11,088,923	10,160,548	9,573,401	8,925,055	8,132,052	7,290,401	6,664,457
621 Loras College .....	2	7i	8i	9i	10i	11	8i	7i
622 SUNY Col Oneonta .....	1e	1e	1	22	0	0	17i	31i
623 Bemidji State University .....	0	0i	0	0	11	14	8i	6i
624 Biola University .....	0	0	0	0	0	0	0	0
625 CA Inst of Integral Stu .....	0	--	--	--	--	--	--	--
626 CA Sch Prof Psy Alameda .....	0	0	0	0	0	0	0	0
627 CA Sch Prof Psy L.A. ....	0	50	245	1,163	1,383	322	164	164
628 CA Sch Prof Psy S Diego .....	0	0	0	0i	0	0	0	0i
629 CA St U Hayward .....	0	28i	54i	80i	106i	132	140i	147i
630 CUNY H H Lehman Col .....	0e	--	--	--	--	--	--	--
Total, 1st 630 insts. ....	11,957,140	11,089,009	10,160,856	9,574,675	8,926,565	8,132,531	7,290,738	6,664,812
631 Catholic U of PR .....	0	68	214	265	492	416	513	508i
632 Chapman University .....	0	0	36i	72	75e	75	60i	48i
633 Chicago Sch of Prof Psy .....	0	--	--	--	--	--	--	--
634 Col Osteo Med of Pacific .....	0	0	0	0	0	0	0	0
635 Columbia U Teachers Col .....	0	138	95	181	230	186	460	367i
636 Delta State University .....	0	27i	51i	75i	99i	123	96i	72i
637 Dillard University .....	0	0	0	0	0	0	0	0i
638 Emmanuel College .....	0	256i	508i	760i	1,012i	1,264e	1,144	1,071i
639 Fielding Institute .....	0	0	0	0	0	0	0	0
640 Forest Inst of Prof Psy .....	0	--	--	--	--	--	--	--
Total, 1st 640 insts. ....	11,957,140	11,089,498	10,161,760	9,576,028	8,928,473	8,134,595	7,293,011	6,666,878
641 Golden Gate University .....	0	--	--	--	--	--	--	--
642 Grand Valley State U .....	0	0	0	0	7	0	5i	10i
643 Institute of Textile Tech .....	0	0	0	0	0	0	0	0i
644 Lake Forest College .....	0	0i	0i	0i	0i	0	15i	26i
645 MA Col Phar Allied Hlth .....	0	0	0	0i	0	5i	9i	13i
646 Maharishi International U .....	0e	--	--	--	--	--	--	--
647 Mayo Grad Sch of Med .....	0	0	0	0	0	0	0	0i
648 Northeastern Illinois U .....	0	0	22	68	26	0	13i	22i
649 Northwest Missouri St U .....	0	4i	8i	12i	16i	20	16i	12i
650 Northwestern St U LA .....	0	0	0	0	0	0	2i	3i
Total, 1st 650 insts. ....	11,957,140	11,089,502	10,161,790	9,576,108	8,928,522	8,134,620	7,293,071	6,666,964

See explanatory information and SOURCE at end of table.

**Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Federally financed							
	1993	1992	1991	1990	1989	1988	1987	1986
651 Oral Roberts University .....	0	0	0	0	290	388	378 i	369 i
652 Pace University All Cmp .....	0e	--	--	--	--	--	--	--
653 Pacific Grad Sch of Psy .....	0	--	--	--	--	--	--	--
654 Pacific Lutheran U .....	0	25	33	244	10	35	43 i	44 i
655 Pacific University .....	0	0 i	0 i	0 i	0 i	0	0 i	0 i
656 Pepperdine University .....	0	--	--	--	--	--	--	--
657 RAND Grad Sch Pol Stu .....	0	0	0	0	0	0	0	0 i
658 Regis College .....	0	61 i	118 i	175 i	232 i	289	322	285
659 SUNY Inst of Tech Utica .....	0e	--	--	--	--	--	--	--
660 Skidmore College .....	0	--	--	--	--	--	--	--
Total, 1st 660 insts. ....	11,957,140	11,089,588	10,161,941	9,576,527	8,929,054	8,135,332	7,293,814	6,667,662
661 Southwest State U .....	0	--	--	--	--	--	--	--
662 Spalding University .....	0	--	--	--	--	--	--	--
663 Stetson University .....	0	11 i	18 i	25 i	32 i	39	0	0 i
664 Talladega College .....	0	0	0	0	350	--	--	--
665 The Wright Institute .....	0	0	0	0	0	0	0	0
666 Trenholm State Tech Col .....	0	0	100	5	5	--	--	--
667 U CA System .....	0	0	0	0	0	473	528	547
668 U WI Platteville .....	0	0	1	0	0	0	1 i	1 i
669 U of Alaska Anchorage .....	0e	--	--	--	--	--	--	--
670 U of Health Sci (MO) .....	0	0	0	0	0	0	0	0 i
Total, 1st 670 insts. ....	11,957,140	11,089,599	10,162,060	9,576,557	8,929,441	8,135,844	7,294,343	6,668,210
671 U of Missouri System Off .....	0	0	20	116	678	756	858	759
672 U of Nebraska Kearney .....	0	1 i	2 i	3 i	4 i	5	12 i	13 i
673 US International U .....	0	0	0	88	61	0	0	0
674 Union Institute .....	0	0	0	0	0	0	0	0 i
675 University of Dallas .....	0	0 i	0 i	0 i	0 i	0	0 i	0 i
676 University of Hartford .....	0e	--	--	--	--	--	--	--
677 Voorhees College .....	0	0	0	0	211	--	--	--
678 WV Sch of Osteo Med .....	0	0	14	23	30	22	11	5 i
679 Widener U All Campuses .....	0	0 i	0 i	0 i	0 i	0	0	0
680 William Paterson Col NJ .....	0	25 i	50 i	75 i	100 i	125	118 i	115 i
Total, 1st 680 insts. ....	11,957,140	11,089,625	10,162,146	9,576,862	8,930,525	8,136,752	7,295,342	6,669,102
681 Xavier University .....	0	0	0 i	0	0	0	45 i	88 i
Total, 1st 681 insts. ....	11,957,140	11,089,625	10,162,146	9,576,862	8,930,525	8,136,752	7,295,387	6,669,190
Total, all other sampled insts. ....	0	0	67,665	57,386	57,220	54,441	46,292	41,182

<sup>1</sup> Johns Hopkins University includes Applied Physics Laboratory with \$431 million in federally financed R&D expenditures.

<sup>2</sup> These data do not include R&D expenditures at university-associated federally funded research and development centers. See tables B-73 and B-74.

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-34. Non-Federal R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 4

Institution ranking	Non-Federal							
	1993	1992	1991	1990	1989	1988	1987	1986
Total, all institutions .....	7,954,212	7,704,857	7,346,791	6,649,054	5,987,065	5,271,082	4,810,372	4,216,620
1 Texas A&M University .....	200,158	192,472	190,278	179,799	157,122	140,998	144,421	131,416
2 University of Michigan .....	175,917	169,607	157,306	130,122	106,030	89,315	87,332	69,790
3 U WI Madison .....	158,407	152,890	142,837	130,979	116,530	109,034	104,828	92,315
4 University of Minnesota .....	157,317	151,100	166,584	148,236	125,734	116,326	113,378	101,435
5 U MD College Park .....	144,303	136,572	128,566	99,612	90,586	80,166	71,045	57,881
6 U CA Berkeley .....	127,952	135,591	117,777	99,344	85,596	69,807	66,445	56,412
7 Pennsylvania State U .....	122,507	126,428	121,604	120,270	105,284	82,424	72,641	63,858
8 University of Arizona .....	122,105	116,087	111,908	102,713	93,586	82,155	73,702	62,817
9 University of Georgia .....	120,189	116,317	117,973	112,878	103,156	97,989	89,181	79,561
10 U CA Davis .....	118,503	117,964	120,703	120,651	107,579	91,220	87,176	75,239
Total, 1st 10 insts. ....	1,447,358	1,415,028	1,375,536	1,244,604	1,091,203	959,434	910,149	790,724
11 Cornell University .....	115,720	118,981	136,057	128,895	128,749	117,997	109,367	90,740
12 Ohio State University .....	112,391	105,351	106,377	99,691	98,001	85,517	64,691	56,205
13 University of IL Urbana .....	111,662	122,884	124,632	108,466	96,192	87,760	84,262	74,951
14 U TX Austin .....	110,032	103,931	123,851	118,610	99,026	82,626	80,536	70,172
15 Louisiana State U System ....	106,225	103,203	90,567	87,047	82,243	79,120	70,981	63,901
16 Rutgers the State U NJ .....	105,856	105,464	102,513	97,008	88,678	75,946	67,377	55,835
17 U CA San Francisco .....	104,451	93,501	77,764	63,021	59,540	55,542	52,134	42,091
18 MA Institute of Tech .....	98,139	86,481	81,234	77,954	72,017	60,165	57,631	56,629
19 Iowa St U of Sci & Tech .....	97,764	87,436	91,864	82,227	74,346	63,420	58,669	55,266
20 NC State U Raleigh .....	93,154	92,507	95,712	87,346	85,658	76,030	68,985	61,844
Total, 1st 20 insts. ....	2,502,752	2,434,767	2,406,107	2,194,869	1,975,653	1,743,557	1,624,782	1,418,358
21 U CA Los Angeles .....	88,909	90,211	82,148	82,353	68,826	62,392	58,068	46,490
22 U TX MD Anderson Cntr Ctr .....	86,317	77,629	76,674	62,394	56,911	48,513	43,255	42,014
23 Baylor Col of Medicine .....	84,629	82,264	82,332	79,329	65,345	45,989	40,345	22,264
24 University of Connecticut .....	84,003	78,043	77,638	74,455	63,144	50,677	44,691	38,145
25 Michigan State University ....	80,567	75,842	71,603	68,766	69,715	66,549	66,821	53,136
26 Georgia Institute of Tech .....	77,475	78,968	75,253	73,351	76,616	64,253	57,210	47,025
27 U of Missouri Columbia .....	76,581	69,195	69,285	63,759	51,743	46,195	40,962	37,585
28 Northwestern University .....	76,540	72,734	82,091	70,968	61,481	48,510	39,634	33,423
29 Purdue University .....	76,078	72,036	68,515	65,915	60,344	54,634	50,829	45,651
30 Harvard University .....	75,238	78,494	73,925	66,722	66,068	57,426	49,119	42,887
Total, 1st 30 insts. ....	3,309,089	3,210,183	3,165,571	2,902,881	2,615,846	2,288,695	2,115,716	1,826,978
31 VA Polytech Inst & St U .....	74,063	79,713	77,390	75,474	65,669	56,184	48,423	45,191
32 Johns Hopkins U .....	71,914	68,846	68,856	69,064	58,211	48,007	34,606	28,130
33 University of Florida .....	71,262	72,599	73,480	75,064	65,039	52,392	54,934	48,776
34 U of Nebraska Lincoln .....	71,029	66,045	60,030	54,912	42,478	35,340	31,554	34,335
35 U of Tennessee System .....	67,084	59,193	64,843	58,000	55,451	50,282	45,609	37,541
36 University of Washington .....	66,510	55,674	53,299	41,960	39,259	30,474	41,878	44,599
37 Duke University .....	66,057	62,936	49,353	34,655	32,054	27,728	21,631	15,952
38 U CA San Diego .....	63,902	62,271	60,971	54,477	45,512	40,694	40,296	32,804
39 U of Pennsylvania .....	60,236	62,850	53,770	55,643	49,934	44,138	47,149	46,821
40 University of Oklahoma .....	58,721	62,413	53,991	41,774	36,936	33,721	30,897	23,065
Total, 1st 40 insts. ....	3,979,867	3,862,723	3,781,554	3,463,904	3,106,389	2,707,655	2,512,693	2,184,192
41 U of South Florida .....	58,604	50,703	49,370	45,923	34,397	31,555	30,743	4,363
42 U MD Baltimore Prof Sch .....	58,216	52,224	56,481	44,848	39,884	35,685	31,687	15,199
43 Yale University .....	57,950	54,224	44,387	35,744	32,304	29,236	28,875	28,472
44 University of Kentucky .....	56,137	52,416	49,501	45,347	42,522	41,279	28,781	32,034
45 U of Iowa .....	55,328	47,058	43,051	36,732	31,629	30,182	21,931	21,099
46 Clemson University .....	55,270	58,808	53,642	52,443	44,215	36,227	37,479	31,413
47 University of IL Chicago .....	55,137	53,783	47,317	41,300	40,041	35,662	30,131	24,737
48 University of Colorado .....	54,633	46,372	41,458	38,329	34,575	31,974	29,132	29,689
49 Oregon State University .....	52,886	47,834	45,100	40,144	42,243	40,076	36,012	36,861
50 Stanford University .....	52,297	102,293	71,722	43,690	47,344	44,932	36,499	31,086
Total, 1st 50 insts. ....	4,536,325	4,428,438	4,283,583	3,888,404	3,495,543	3,064,463	2,823,963	2,439,145

See explanatory information and SOURCE at end of table.

**Table B-34. Non-Federal R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Non-Federal							
	1993	1992	1991	1990	1989	1988	1987	1986
51 Oklahoma State University ..	52,080	55,854	51,736	47,941	39,539	43,786	37,845	37,417
52 U of Southern California .....	50,857	53,027	43,365	45,388	43,008	37,394	33,246	23,493
53 Auburn University .....	50,713	51,358	54,634	52,166	38,635	34,494	34,599	36,037
54 Indiana University .....	50,500	47,694	40,630	32,036	23,459	21,028	21,130	19,136
55 Washington University .....	49,847	46,476	47,989	45,490	31,590	28,986	25,662	21,827
56 Washington State U .....	48,756	46,867	42,987	39,972	32,476	29,958	27,591	26,277
57 U of NC Chapel Hill .....	48,237	47,775	39,196	30,645	28,817	24,316	21,225	20,829
58 SUNY Buffalo .....	47,480	50,800	44,496	42,314	35,838	27,538	19,262	17,096
59 University of Kansas .....	47,396	43,012	39,563	34,358	30,691	26,843	27,662	26,016
60 Colorado State University ....	46,652	42,660	24,785	23,223	17,779	14,769	13,658	12,767
Total, 1st 60 insts. ....	5,028,843	4,913,961	4,712,964	4,281,937	3,817,375	3,353,575	3,085,843	2,680,040
61 U TX SW Med Ctr Dallas .....	46,315	40,764	36,765	30,954	28,666	22,035	17,525	14,115
62 Wayne State University .....	45,260	45,558	39,414	33,967	31,354	27,793	22,408	17,800
63 U Arkansas Fayetteville .....	43,927	32,347	28,460	26,132	23,887	19,911	19,739	19,954
64 KS St U Agri & App Sci .....	42,980	39,140	37,284	34,660	31,351	28,880	27,317	27,739
65 University of Virginia .....	42,439	41,952	35,673	38,014	30,067	27,090	22,594	18,931
66 Princeton University .....	41,857	38,236	39,667	39,955	35,738	29,646	21,584	15,590
67 U Med & Dent NJ .....	40,886	45,413	42,019	38,604	26,468	20,178	15,233	14,482
68 Mississippi State U .....	40,684	36,008	38,584	37,066	35,976	31,449	28,018	31,032
69 U CA Riverside .....	39,939	40,369	41,213	39,086	37,629	36,311	36,157	33,255
70 SUNY Stony Brook .....	39,794	35,298	31,813	26,325	29,729	25,393	14,548	18,948e
Total, 1st 70 insts. ....	5,452,924	5,309,046	5,083,856	4,626,700	4,128,240	3,622,261	3,310,966	2,891,886
71 Emory University .....	39,701	31,504	31,354	30,407	18,216	17,228	22,191	18,296
72 Carnegie Mellon U .....	39,595	40,723	37,740	35,651	36,556	31,042	29,946	30,214
73 U of Alabama Birmingham ..	39,028	35,452	37,000	36,117	32,462	22,661	18,158	14,064
74 Tulane University .....	38,694	38,886	35,068	28,076	21,100	18,892	16,557	16,451
75 Rockefeller University .....	37,542	37,270	37,331	38,457	32,753	31,136	28,777	27,478
76 U TX Med Br Galveston .....	37,443	33,391	24,112	18,917	15,565	13,330	7,613	8,005i
77 University of Pittsburgh .....	36,799	36,173	30,390	27,016	30,048	26,147	22,123	18,254
78 New York University .....	36,141	35,318	30,210	27,755	23,308	23,126	22,798	23,688
79 Arizona State University .....	36,110	36,198	37,243	33,259	22,196	20,504	24,754	20,039
80 U CA Irvine .....	36,085	33,944	29,871	25,582	20,314	17,206	13,553	11,651
Total, 1st 80 insts. ....	5,830,062	5,667,905	5,414,175	4,927,937	4,380,758	3,843,533	3,517,436	3,080,026
81 University of Cincinnati .....	35,118	33,904	33,153	29,495	29,233	24,493	21,760	16,610
82 University of New Mexico .....	33,870	32,830	37,203	32,279	29,036	22,867e	20,668e	14,046
83 Case Western Reserve U .....	32,824	35,004	27,809	22,869	17,536	18,225	17,270	10,498e
84 University Hawaii Manoa .....	32,599	32,574	33,309	33,860	30,159	25,718	22,873	22,061
85 U MA Amherst .....	32,046	29,582	--	--	--	--	--	--
86 Utah State University .....	31,837	34,872	32,405	27,485	27,495	24,510	19,234	19,537
87 University of Rochester .....	30,912	29,579	24,903	23,367	22,948	21,528	21,276	19,885
88 University of Miami .....	29,403	22,309	27,132	26,200	27,197	21,812	27,106	27,623
89 U of South Carolina .....	28,812	30,617	32,007	26,890	22,825	16,181	15,121	14,246
90 University of Idaho .....	28,778	27,539	24,258	21,124	19,672	19,108	15,350	14,081
Total, 1st 90 insts. ....	6,146,261	5,976,715	5,686,354	5,171,506	4,606,859	4,037,975	3,698,094	3,238,613
91 Virginia Commonwealth U .....	28,320	23,298	20,634	21,124	17,042	11,801	11,234	11,487
92 Texas Tech University .....	27,222	25,748	25,671	24,775	22,987	17,754	17,301	14,825
93 Temple University .....	27,138	27,052	26,048	23,285	20,250	20,804	17,661	14,037
94 U TX Hlth Sci Ctr San Ant .....	26,772	24,131	18,998	16,232	13,177	12,145	12,007	10,386
95 University of Delaware .....	26,457	27,341	24,643	22,531	20,111	18,315	18,019	16,220
96 North Dakota State U .....	26,215	25,789	24,835	6,051	5,141	4,428	16,638	15,567
97 CUNY Mt Sinai Sch of Med ..	25,537	24,708	24,275	20,145	19,623	16,875	15,113	14,027
98 Georgetown University .....	25,322	22,278	18,857	14,774	16,246	14,117	11,504	9,360
99 U of Alaska Fairbanks .....	25,180	35,815	33,097	33,675	30,042	26,415e	25,909i	25,401i
100 Florida State University .....	24,239	22,529	25,316	30,006	29,747	26,652	25,004	22,329
Total, 1st 100 insts. ....	6,408,663	6,235,404	5,928,728	5,384,104	4,801,225	4,207,281	3,868,484	3,392,252

See explanatory information and SOURCE at end of table.



**Table B-34. Non-Federal R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	Non-Federal							
	1993	1992	1991	1990	1989	1988	1987	1986
101 West Virginia University .....	23,179	24,742	30,104	24,985	21,907	14,377	13,577	10,668
102 Rensselaer Polytech Inst .....	22,026	26,456	26,734	24,071	19,662	18,191	10,969	8,237
103 University of Utah .....	22,026	29,100	25,852	26,721	21,521	18,406	13,968	9,050
104 Columbia U Main Division ....	22,014	24,739	31,105	26,499	25,433	21,418	16,886	16,980
105 U MA Worcester .....	21,792	17,929	--	--	--	--	--	--
106 U of NE Med Ctr Omaha .....	21,538	21,824	17,340	8,766	8,719	6,919	5,249	5,116
107 U of Nevada Reno .....	21,467	23,461	18,445	9,527	9,494	7,878	7,138	5,660 i
108 U of Central Florida .....	21,395	18,478	31,529	21,264	19,838	7,831	6,870 i	5,909 e
109 Rush University .....	21,252	17,054	20,349	15,201	14,159	13,274	8,519	6,778
110 New Mexico State U .....	21,153	21,028	21,214	16,600	15,270	17,520	20,768	18,523
Total, 1st 110 insts. ....	6,626,505	6,460,215	6,151,400	5,557,738	4,957,228	4,333,095	3,972,428	3,479,173
111 Med U of South Carolina .....	21,072	14,726	11,510	12,218	11,470	9,993	8,861	8,981
112 University of Houston .....	20,688	23,076	22,152	20,403	17,871	12,651	13,338	12,373
113 U TX Hlth Sci Ctr Houston ....	20,122	18,784	21,118	16,690	17,360	15,687	10,431	9,960
114 Boston University .....	19,565	17,024	14,715	13,192	9,923	9,587	8,893	7,768
115 Strn IL U Carbondale .....	18,939	20,712	21,248	17,838	16,786	13,494	12,609	13,170
116 Montana State University .....	18,815	20,976	20,169	18,596	17,187	14,517	14,366 i	14,215
117 SUNY Col Env Sci & Frstry ..	18,679	16,029	16,923	16,698	15,338	11,248	10,481	9,870 i
118 NM Inst Mining & Tech .....	18,667	17,526	17,413 i	17,301	15,106	14,865	14,786	9,666
119 U of VT & State Agri Col .....	18,309	16,785	15,681	14,607	14,208	11,276	9,258	9,851
120 Brown University .....	18,301	17,729	13,932	9,844	9,058	6,406	6,086	6,573
Total, 1st 120 insts. ....	6,819,662	6,643,582	6,326,261	5,715,125	5,101,535	4,452,819	4,081,537	3,581,600
121 University of Wyoming .....	17,981	16,883	10,227	10,624	9,506	9,293	8,615	9,342
122 Oregon Health Sciences U ..	17,947	15,765	12,764	14,179	10,935	11,269	10,683	8,177
123 Yeshiva University .....	17,865	19,044	18,890	18,902	16,272	16,560	14,005	13,338
124 Medical Col of Wisconsin .....	17,428	15,911	15,384	13,028	13,519	13,428	14,667	7,756
125 Medical Col of Georgia .....	17,222	13,679	4,001	4,007	3,971	2,304	2,348	1,992
126 U CA Santa Cruz .....	16,065	16,176	15,815	12,492	11,108	9,900	10,790	7,166
127 University of Chicago .....	15,947	20,941	19,606	21,628	18,970	17,574	15,990	14,722
128 U of Maine Orono .....	15,920	14,238	17,020	14,559	11,686	10,293	9,165	10,731
129 U of New Hampshire .....	15,920	12,153	11,075	11,539	9,126	8,747	6,932	7,150
130 Dartmouth College .....	15,828	14,877	15,067	13,602	11,230	9,834	9,363	7,251 i
Total, 1st 130 insts. ....	6,987,785	6,803,249	6,466,110	5,849,685	5,217,858	4,562,021	4,184,095	3,669,225
131 Wake Forest University .....	15,785	12,414	10,829	9,472	8,645	7,542	4,824	4,208 i
132 San Diego St University .....	15,631	15,004	11,826	7,877	7,076	6,682	5,587	3,927
133 Syracuse University .....	15,625	17,430	16,414	14,887	15,176	11,266	12,361	11,490
134 NJ Inst of Technology .....	15,506	15,348	12,383	12,494	10,320	7,242	9,571	7,639
135 Lehigh University .....	14,831	14,396	16,042	16,013	16,079	16,792	15,214	13,212
136 U CA Santa Barbara .....	14,718	13,230	12,946	11,877	10,840	10,393	9,848	9,196
137 U of PR Mayaguez .....	14,669	16,121	16,170 i	16,218	15,229	14,212	15,759	14,545 i
138 The University of Alabama ....	14,566	15,696	15,821	14,547	11,853	9,460	8,223 e	7,766
139 Brandeis University .....	14,388	13,429	12,557	12,062	11,516	8,023	6,954 i	5,887 i
140 U MD Center for EES .....	13,642	14,236	13,348	13,273	11,222	10,140	9,400	7,515
Total, 1st 140 insts. ....	7,137,146	6,950,553	6,604,446	5,978,405	5,335,814	4,663,773	4,281,836	3,754,610
141 George Washington U .....	13,479	11,177	6,076	5,555	5,064	3,634	4,178	3,348 i
142 U of Rhode Island .....	13,333	15,362 e	14,862	15,335	14,279	12,973	8,080	7,872 i
143 Thomas Jefferson U .....	12,813	12,468	9,966	8,518	8,094	7,465	6,287	5,095
144 Vanderbilt University .....	12,498	17,021	9,738	8,315	9,067	15,945	12,246	10,446
145 U of Missouri Rolla .....	11,897	10,800	10,072	10,422	14,233	15,153	10,451	10,121
146 California Inst of Tech .....	11,551	12,535	14,706	15,153	14,564	13,780	15,479	15,068
147 Col of William & Mary .....	11,458	10,681	11,225	11,332	10,045	3,089	2,674	1,823
148 University of Akron .....	11,057	10,582	9,994	7,367	7,203	4,915	5,405	3,536
149 Loyola U of Chicago .....	11,002	12,028	7,999	6,057	5,252	3,880	3,319	3,072
150 U TX Arlington .....	10,839	10,600	10,146	3,934	5,658	5,415	4,093	3,995
Total, 1st 150 insts. ....	7,257,073	7,073,807	6,709,230	6,070,393	5,429,273	4,750,022	4,354,048	3,818,986

See explanatory information and SOURCE at end of table.



**Table B-34. Non-Federal R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

Page 4 of 4

Institution ranking	Non-Federal							
	1993	1992	1991	1990	1989	1988	1987	1986
151 U WI Milwaukee .....	10,790	10,926	10,057	8,924	7,981	7,762	7,140	6,740
152 University of Louisville .....	10,572	10,133	10,102	7,284	8,513	17,507	18,449	11,555
153 SUNY Albany .....	10,542	9,868	8,376	7,537	9,069	6,030	5,796	4,771
154 Wright State University .....	10,508	8,746	6,599	6,025	5,329	4,539	3,565	5,435
155 Tufts University .....	10,351	8,521	8,635	8,719	9,653	12,272	9,349	8,093i
156 Ohio University .....	10,284	9,955	8,257	8,842	7,739	7,323	5,720	5,198
157 U of Southwestern LA .....	10,189	9,808	9,303	7,445	5,999	4,229	4,428	4,177i
158 SUNY Hlth Sci Ctr Brklyn .....	9,729	8,275	14,875	8,299	8,971	7,620	6,514	5,611i
159 University of Oregon .....	9,273	9,240	6,840	6,195	5,190	3,994	4,032	3,284
160 San Jose State University ....	9,180	9,378	4,122	2,716	2,268	4,160	3,737i	3,314i
Total, 1st 160 insts. ....	7,358,491	7,168,657	6,796,396	6,142,379	5,499,985	4,825,458	4,422,778	3,877,164
161 U of Alabama Huntsville .....	9,170	7,585	7,136	8,210	8,185	6,630	3,610	2,842
162 South Dakota State U .....	9,017	7,941	7,409	5,845	5,218	5,279	5,257	4,616
163 Drexel University .....	8,979	13,315	12,146	13,318	11,612	9,445	7,933	7,612
164 Michigan Tech University .....	8,919	9,937	12,797	9,992	9,976	8,095	7,899	8,417
165 University of Mississippi .....	8,817	7,264	7,811	7,098	6,251	5,808	5,130	5,184
166 U of Nevada Las Vegas .....	8,788	3,294	1,923	2,179i	2,437i	2,695	2,193i	1,691i
167 SUNY Binghamton .....	8,755	8,232	6,740	6,978	6,356	6,194	5,768	4,981
168 Oregon Grad Inst Sci Tech ..	8,697	5,194	4,198	2,425	2,243	1,957	1,929	1,891i
169 Unif Svcs U of Hlth Sci .....	8,527	7,498i	6,468i	5,438i	4,408i	3,378	0	100
170 Rice University .....	8,387	8,068	7,739	6,270	5,223	4,551	4,143i	3,735i
Total, 1st 170 insts. ....	7,446,547	7,246,985	6,870,763	6,210,132	5,561,894	4,879,490	4,466,640	3,918,233
171 U MA Lowell .....	8,333	8,008	5,862	6,629	5,268	5,295	3,277	2,357
172 Memphis State University ....	8,236	8,583	9,046	9,407	7,593	6,554	5,864	4,407
173 Tennessee Tech U .....	8,212	8,338	8,939	8,345	6,796	6,752	6,259	4,277i
174 Hahnemann University .....	8,082	8,406	5,677	5,351	3,349	1,733	2,270	1,600
175 The Medical Col of PA .....	8,006	7,921	9,685	6,939	9,028	6,257	3,632	3,486i
176 Woods Hole Ocngrphc Inst ..	7,973	8,616	9,825e	9,391	10,548	9,300	5,822	5,009
177 University of Montana .....	7,866	5,153	4,179	3,864	3,711	3,917e	3,760	3,141i
178 U MA Boston .....	7,612	5,955	--	--	--	--	--	--
179 University of Notre Dame .....	7,330	7,621	7,715	6,506	6,176	4,266	4,010	3,597
180 Inst Paper Sci and Tech .....	7,033	6,157	6,479	4,796	4,849	4,733	4,308	4,341
Total, 1st 180 insts. ....	7,525,230	7,321,743	6,938,170	6,271,360	5,619,212	4,928,297	4,505,842	3,950,448
181 Univeristy of North Texas .....	6,749	8,769	8,638	7,767	6,308	4,210	2,702	2,283
182 University of Dayton .....	6,719	6,082	6,793	7,133	5,334	5,382	4,735	3,847
183 Colorado School of Mines .....	6,594	6,435	6,484	5,633	4,929	3,835	3,369	3,089
184 George Mason University .....	6,464	3,491	4,125	5,517	3,049	2,354	1,797e	1,281i
185 Georgia State University .....	6,307	6,005	5,755	5,321	4,493	3,503	3,152	1,739
186 Western Michigan U .....	6,247	4,763	5,166	3,672	2,615i	1,558	1,040	1,294
187 Eastern Virginia Med Sch .....	6,065	4,272	4,019	2,714	1,238	1,323	1,709	1,349i
188 U of Missouri Kansas City ....	6,009	5,470	5,177	5,543	5,535	6,145	3,978	3,167
189 Kent State University .....	5,712	5,849	3,298	2,516	2,921	2,059	1,580	1,444
190 Florida Atlantic U .....	5,676	3,590	2,847	2,975	2,174	2,198	2,017	1,400
Total, 1st 190 insts. ....	7,587,772	7,376,469	6,990,272	6,320,151	5,657,808	4,960,864	4,531,921	3,971,341
191 Desert Research Institute ....	5,673	9,071	8,153	8,085	7,037	6,710	6,360	5,610
192 Brigham Young University ....	5,620	6,363	5,600	6,251	6,759	5,307	6,321	5,958i
193 CUNY City College .....	5,616	4,279	4,231	2,419	2,719	2,321	1,527	1,451i
194 Northern Illinois U .....	5,552	5,324	5,457	5,679	4,356	3,545	3,002	3,172
195 University of Tulsa .....	5,552	4,592	4,054	3,288	2,403	2,422	2,029i	1,635i
196 U TX Dallas .....	5,340	5,319	5,749	6,187	4,453	3,827	2,827	1,918
197 Creighton University .....	5,147	4,569	5,744	6,524	5,548	5,822	4,390i	2,958i
198 New York Medical College ....	5,023	3,738	3,577	4,216	2,937	2,720	1,756	1,241
199 Old Dominion University .....	4,961	4,575	3,464	3,442	2,932	1,918	2,128	1,637i
200 CA St U Northridge .....	4,949	--	--	--	--	--	--	--
Total, 1st 200 insts. ....	7,641,205	7,424,299	7,036,301	6,366,242	5,696,952	4,995,456	4,562,261	3,996,921
Total, all other sampled insts. ....	313,007	280,558	310,490	282,812	290,113	275,626	248,111	219,699

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-35. R&D expenditures at universities and colleges,  
by source of funds: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
Total, all institutions .....	19,911,352	11,957,140	1,558,947	1,373,957	3,551,891	1,469,417
1 Johns Hopkins U .....	745,515	673,601	1,205	12,564	31,944	26,201
2 University of Michigan .....	425,868	249,951	4,891	26,733	104,163	40,130
3 U WI Madison .....	372,362	213,955	60,358	12,392	47,524	38,133
4 MA Institute of Tech .....	365,553	267,414	3,058	58,106	8,139	28,836
5 University of Washington .....	335,329	268,819	8,211	30,780	20,295	7,224
6 University of Minnesota .....	332,033	174,716	49,861	21,524	64,840	21,092
7 Texas A&M University .....	322,691	122,533	82,284	27,182	85,772	4,920
8 U CA San Francisco .....	314,599	210,148	19,200	9,244	43,910	32,097
9 Cornell University .....	310,949	195,229	41,770	15,789	32,619	25,542
10 U CA San Diego .....	307,051	243,149	10,057	10,081	21,768	21,996
Total, 1st 10 insts. ....	3,831,950	2,619,515	280,895	224,395	460,974	246,171
11 Stanford University .....	306,676	254,379	1,188	15,337	18,703	17,069
12 U CA Berkeley .....	284,346	156,394	28,597	12,269	67,838	19,248
13 Pennsylvania State U .....	282,659	160,152	7,989	41,736	72,782	0
14 U CA Los Angeles .....	277,974	189,065	5,514	13,606	35,305	34,484
15 Harvard University .....	257,207	181,969	358e	9,319e	14,610e	50,951
16 University of IL Urbana .....	252,811	141,149	29,247	16,095	56,360	9,960
17 U TX Austin .....	249,158	139,126	17,700	4,106	63,821	24,405
18 University of Arizona .....	235,528	113,423	5,163	13,469	82,094	21,379
19 U of Pennsylvania .....	233,829	173,593	2,364	11,440	19,649	26,783
20 U MD College Park .....	229,344	85,041	64,562	19,271	60,470	0
Total, 1st 20 insts. ....	6,441,482	4,213,806	443,577	381,043	952,606	450,450
21 Yale University .....	226,850	168,900	1,698	9,994	21,188	25,070
22 U CA Davis .....	223,758	105,255	16,240	6,852	78,581	16,830
23 Ohio State University .....	221,460	109,069	29,836	13,647	30,823	38,085
24 Columbia U Main Division .....	204,710	182,696	1,548	5,919	3,683	10,864
25 Duke University .....	202,434	136,377	3,684	34,572	13,786	14,015
26 U of Southern California .....	200,822	149,965	10,392	13,444	27,021	0
27 University of Colorado .....	193,217	138,584	2,668	12,218	16,101	23,646
28 Washington University .....	179,329	129,482	3,599	19,388	13,563	13,297
29 U of NC Chapel Hill .....	179,157	130,920	18,551	2,539	27,147	0
30 University of Pittsburgh .....	178,575	141,776	848	9,791	13,089	13,071
Total, 1st 30 insts. ....	8,451,794	5,606,830	532,641	509,407	1,197,588	605,328
31 Georgia Institute of Tech .....	175,873	98,398	1,985	28,872	46,618	0
32 University of Georgia .....	172,274	52,085	34,119	8,803	75,959	1,308
33 Baylor Col of Medicine .....	172,252	87,623	3,215	9,914	21,171	50,329
34 University of Rochester .....	161,810	130,898	6,847	7,868	3,723	12,474
35 Rutgers the State U NJ .....	161,025	55,169	24,221	7,734	64,358	9,543
36 Louisiana State U System .....	158,823	52,598	56,400	9,203	30,993	9,629
37 NC State U Raleigh .....	155,624	62,470	50,597	22,229	19,220	1,108
38 Northwestern University .....	154,227	77,687	1,358	8,784	49,200	17,198
39 Michigan State University .....	150,861	70,294	25,601	6,442	35,159	13,365
40 Purdue University .....	149,032	72,954	17,538	13,174	36,007	9,359
Total, 1st 40 insts. ....	10,063,595	6,367,006	754,522	632,430	1,579,996	729,641
41 U of Iowa .....	148,811	93,483	3,036	10,478	31,562	10,252
42 Iowa St U of Sci & Tech .....	148,459	50,695	35,035	7,402	48,977	6,350
43 U of Tennessee System .....	143,662	76,578	23,361	11,722	22,351	9,650
44 University of Florida .....	142,966	71,704	10,255	11,105	42,536	7,366
45 VA Polytech Inst & St U .....	135,771	61,708	32,055	13,224	25,381	3,403
46 U of Alabama Birmingham .....	133,790	94,762	2,539	10,832	10,204	15,453
47 University of Connecticut .....	133,054	49,051	7,988	8,357	58,275	9,383
48 New York University .....	129,774	93,633	1,405	4,917	10,475	19,344
49 SUNY Buffalo .....	128,203	80,723	6,333	5,584	19,150	16,413
50 Indiana University .....	127,877	77,377	1,731	4,850	27,391	16,528
Total, 1st 50 insts. ....	11,435,962	7,116,720	878,260	720,901	1,876,298	843,783

See explanatory information and SOURCE at end of table.

**Table B-35. R&D expenditures at universities and colleges,  
by source of funds: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
51 U TX MD Anderson Cntr Ctr	127,475	41,158	0	0	61,565	24,752
52 Case Western Reserve U ....	124,691	91,867	3,648	6,480	9,833	12,863
53 University of Miami .....	120,875	91,472	1,772	10,828	4,536	12,267
54 Emory University .....	120,125	80,424	2,394	8,145	18,464	10,698
55 Carnegie Mellon U .....	118,261	78,666	5,699	18,180	6,680	9,036
56 University of Virginia .....	118,019	75,580	6,103	10,389	13,078	12,869
57 California Inst of Tech .....	115,439	103,888	762	3,835	4,411	2,543
58 Colorado State University ....	115,385	68,733	14,291	5,369	25,138	1,854
59 U TX SW Med Ctr Dallas .....	114,258	67,943	20	11,173	6,835	28,287
60 Oregon State University .....	114,004	61,118	27,820	4,291	12,110	8,665
Total, 1st 60 insts. ....	12,624,494	7,877,569	940,769	799,591	2,038,948	967,617
61 University of Chicago .....	111,877	95,930	165	1,958	4,913	8,911
62 U MD Baltimore Prof Sch .....	111,772	53,556	22,766	14,420	15,035	5,995
63 SUNY Stony Brook .....	107,817	68,023	1,168	4,670	28,574	5,382
64 U of Missouri Columbia .....	106,193	29,612	13,810	7,907	48,148	6,716
65 University of IL Chicago .....	105,552	50,415	4,886	4,570	32,161	13,520
66 University of Utah .....	105,263	83,237	226	4,357	10,908	6,535
67 University of Kentucky .....	102,911	46,774	6,099	9,924	35,189	4,925
68 U CA Irvine .....	100,631	64,546	5,595	4,898	14,029	11,563
69 Princeton University .....	98,603	56,746	847	5,866	24,197	10,947
70 Vanderbilt University .....	96,181	83,683	263	2,523	4,837	4,875
Total, 1st 70 insts. ....	13,671,294	8,510,091	996,594	860,684	2,256,939	1,046,986
71 U of Nebraska Lincoln .....	94,959	23,930	34,876	2,287	22,995	10,871
72 University of Cincinnati .....	92,512	57,394	1,756	10,621	17,069	5,672
73 Washington State U .....	92,434	43,678	5,482	2,726	32,006	8,542
74 University of Oklahoma .....	92,019	33,298	10,822	3,918	29,884	14,097
75 Boston University .....	91,158	71,593	994	9,982	0	8,589
76 Yeshiva University .....	89,636	71,771	0	1,780	11,025	5,060
77 New Mexico State U .....	85,974	64,821	9,079	3,466	7,751	857
78 Wayne State University .....	85,627	40,367	6,208	7,738	23,126	8,188
79 University of Kansas .....	85,134	37,738	6,164	4,037	33,368	3,827
80 Woods Hole Ocngrphc Inst ..	81,519	73,546	429	644	1,245	5,655
Total, 1st 80 insts. ....	14,562,266	9,028,227	1,072,404	907,883	2,435,408	1,118,344
81 Clemson University .....	78,569	23,299	15,296	6,035	29,579	4,360
82 Utah State University .....	77,263	45,426	12,078	3,268	15,333	1,158
83 Virginia Commonwealth U ....	77,097	48,777	2,162	6,591	17,248	2,319
84 University of New Mexico .....	76,736	42,866	2,657	5,474	14,383	11,356
85 U Med & Dent NJ .....	76,410	35,524	5,195	7,431	21,017	7,243
86 Tulane University .....	75,634	36,940	2,164	6,618	23,581	6,331
87 CUNY Mt Sinai Sch of Med ..	75,337	49,800	1,280	5,549	8,249	10,459
88 U of South Florida .....	75,322	16,718	6,033	5,041	41,121	6,409
89 U TX Hlth Sci Ctr San Ant ....	75,239	48,467	6,178	6,746	10,019	3,829
90 Rockefeller University .....	74,396	36,854	28	4,907	16,181	16,426
Total, 1st 90 insts. ....	15,324,269	9,412,898	1,125,475	965,543	2,632,119	1,188,234
91 University Hawaii Manoa .....	73,961	41,362	27,099	151	3,109	2,240
92 Georgetown University .....	73,785	48,463	58	5,914	12,595	6,755
93 Oklahoma State University ..	72,920	20,840	10,232	3,531	35,992	2,325
94 Mississippi State U .....	70,300	29,616	19,435	6,012	8,195	7,042
95 U CA Santa Barbara .....	68,775	54,057	1,663	2,487	6,455	4,113
96 Auburn University .....	68,151	17,438	22,571	6,059	16,736	5,347
97 U TX Med Br Galveston .....	67,998	30,555	7,809	4,831	16,344	8,459
98 U of Alaska Fairbanks .....	66,796	41,616	3,012	4,751	17,412	5
99 Arizona State University .....	66,142	30,032	997	4,772	28,620	1,721
100 U MA Amherst .....	64,111	32,065	4,889	5,288	15,482	6,387
Total, 1st 100 insts. ....	16,017,208	9,758,942	1,223,240	1,009,339	2,793,059	1,232,628

See explanatory information and SOURCE at end of table.

**Table B-35. R&D expenditures at universities and colleges,  
by source of funds: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
101 Florida State University .....	62,929	38,690	2,325	1,377	18,491	2,046
102 KS St U Agri & App Sci .....	62,562	19,582	27,845	2,889	10,708	1,538
103 Dartmouth College .....	59,920	44,092	4,456	3,375	2,858	5,139
104 U CA Riverside .....	59,065	19,126	3,641	1,208	31,601	3,489
105 U TX Hlth Sci Ctr Houston ...	58,786	38,664	1,448	6,907	4,247	7,520
106 U Arkansas Fayetteville .....	58,325	14,398	23,184	4,964	13,735	2,044
107 Wake Forest University .....	57,646	41,861	309	8,333	3,677	3,466
108 Brown University .....	57,152	38,851	138	1,825	14,284	2,054
109 U of South Carolina .....	57,062	28,250	761	6,414	19,016	2,621
110 Tufts University .....	56,976	46,625	11	9,328e	985e	27e
Total, 1st 110 insts. ....	16,607,631	10,089,081	1,287,358	1,055,959	2,912,661	1,262,572
111 Oregon Health Sciences U ..	56,860	38,913	50	992	13,446	3,459
112 University of Houston .....	55,038	34,350	11,034	1,339	5,662	2,653
113 U MA Worcester .....	54,277	32,485	153	3,721	17,918	0
114 West Virginia University .....	54,271	31,092	2,004	3,973	13,952	3,250
115 Temple University .....	53,686	26,548	316	6,011	18,279	2,532
116 University of Delaware .....	52,627	26,170	3,710	4,857	13,937	3,953
117 Thomas Jefferson U .....	51,106	38,293	0	12,813	0	0
118 U of VT & State Agri Col .....	49,839	31,530	2,666	4,573	8,253	2,817
119 Medical Col of Wisconsin .....	48,689	31,261	1,277	5,053	3,164	7,934
120 U of Rhode Island .....	45,942	32,609	2,674	1,387	9,152	120
Total, 1st 120 insts. ....	17,129,966	10,412,332	1,311,242	1,100,678	3,016,424	1,289,290
121 University of Dayton .....	45,052	38,333	260	4,813	1,578	68
122 University of Idaho .....	44,655	15,877	12,290	5,608	10,502	378
123 Rensselaer Polytech Inst .....	44,132	22,106	4,396	10,813	2,310	4,507
124 Med U of South Carolina .....	42,543	21,471	0	1,793	4,255	15,024
125 George Washington U .....	41,177	27,698	427	2,168	3,702	7,182
126 U of New Hampshire .....	39,555	23,635	1,390	1,467	8,910	4,153
127 U of Nevada Reno .....	38,564	17,097	1,024	1,033	18,741	669
128 Texas Tech University .....	38,119	10,897	10,987	5,284	8,803	2,148
129 U CA Santa Cruz .....	37,886	21,821	1,961	458	9,719	3,927
130 SUNY Albany .....	37,860	27,318	130	1,240	4,859	4,313
Total, 1st 130 insts. ....	17,539,509	10,638,585	1,344,107	1,135,355	3,089,803	1,331,659
131 Brandeis University .....	36,213	21,825	120	0	4,520	9,748
132 North Dakota State U .....	34,971	8,756	1,399	1,191	22,219	1,406
133 U of Alabama Huntsville .....	34,153	24,983	1,257	2,857	5,056	0
134 Rush University .....	34,039	12,787	1,150	5,036	8,817	6,249
135 U of Central Florida .....	33,922	12,527	3,204	5,810	12,381	0
136 Montana State University .....	32,911	14,096	7,938	2,910	7,967	0
137 University of Wyoming .....	32,556	14,575	4,111	2,268	10,637	965
138 San Diego St University .....	32,493	16,862	7,181	1,418	4,992	2,040
139 Syracuse University .....	32,443	16,818	3,786	2,166	6,551	3,122
140 U of NE Med Ctr Omaha .....	31,669	10,131	4,632	3,488	11,528	1,890
Total, 1st 140 insts. ....	17,874,879	10,791,945	1,378,885	1,162,499	3,184,471	1,357,079
141 Lehigh University .....	30,869	16,038	1,403	8,088	4,411	929
142 Unif Svcs U of Hlth Sci .....	30,846	22,319	0	0	8,527	0
143 University of Oregon .....	30,738	21,465	672	545	5,573	2,483
144 Rice University .....	30,403	22,016	2,336	4,550	0	1,501
145 Loyola U of Chicago .....	29,232	18,230	537	3,614	2,844	4,007
146 SUNY Hlth Sci Ctr Brklyn .....	27,645	17,916	324	4,421	3,293	1,691
147 Sthrn IL U Carbondale .....	26,376	7,437	6,071	2,033	9,062	1,773
148 The Medical Col of PA .....	24,996	16,990	57	3,681	3,563	705
149 Medical Col of Georgia .....	24,935	7,713	404	2,777	12,394	1,647
150 U of Maine Orono .....	24,879	8,959	1,711	4,117	9,674	418
Total, 1st 150 insts. ....	18,155,798	10,951,028	1,392,400	1,196,325	3,243,812	1,372,233

See explanatory information and SOURCE at end of table.

**Table B-35. R&D expenditures at universities and colleges,  
by source of funds: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
151 US Naval Postgrad School ..	24,296	23,640	141	341	0	174
152 NM Inst Mining & Tech .....	24,040	5,373	2,262	9,803	6,373	229
153 NJ Inst of Technology .....	23,781	8,275	5,314	3,459	5,878	855
154 University of Notre Dame .....	23,745	16,415	1,147	4,024	2,159	0
155 University of Mississippi .....	23,734	14,917	2,221	2,727	2,507	1,362
156 U of PR Mayaguez .....	23,156	8,487	7,629	382	5,560	1,098
157 The University of Alabama .....	23,149	8,583	165	2,419	11,982	0
158 Florida A&M University .....	22,777	18,954	2,320	1,503	0	0
159 SUNY Col Env Sci & Frstry ..	21,856	3,177	762	2,010	15,201	706
160 Col of William & Mary .....	21,793	10,335	1,285	1,117	8,626	430
Total, 1st 160 insts. ....	18,388,125	11,069,184	1,415,646	1,224,110	3,302,098	1,377,087
161 Desert Research Institute .....	21,187	15,514	1,887	3,293	493	0
162 San Jose State University .....	21,005	11,825	2,537	4,324	1,655	664
163 St Louis University .....	20,826	18,583	182	1,054	255	752
164 Wright State University .....	20,589	10,081	1,833	539	5,828	2,308
165 CUNY City College .....	20,401	14,785	599	1,327	0	3,690
166 Drexel University .....	20,314	11,335	1,270	4,233	3,476	0
167 University of Louisville .....	19,496	8,924	99	3,651	5,839	983
168 U of Nevada Las Vegas .....	19,373	10,585	1,450	919	5,959	460
169 University North Dakota .....	19,204	16,467	133	982	1,376	246
170 U MD Center for EES .....	19,055	5,413	3,015	115	9,142	1,370
Total, 1st 170 insts. ....	18,589,575	11,192,696	1,428,651	1,244,547	3,336,121	1,387,560
171 Michigan Tech University .....	18,696	9,777	852	3,127	4,940	0
172 Northeastern University .....	18,517	15,339	325	1,445	144	1,264
173 New York Medical College .....	18,491	13,468	362	1,480	0	3,181
174 Howard University .....	18,427	14,819	540	434	1,418	1,216
175 Oregon Grad Inst Sci Tech ..	18,288	9,591	713	2,638	2,145	3,201
176 U WI Milwaukee .....	18,245	7,455	6,710	452	2,348	1,280
177 U of Missouri Rolla .....	18,025	6,128	690	1,717	7,049	2,441
178 Hahnemann University .....	17,756	9,674	28	957	5,910	1,187
179 U of PR Med Sci Campus .....	17,574	13,821	543	0	2,090	1,120
180 George Mason University .....	15,830	9,366	969	1,654	2,656	1,185
Total, 1st 180 insts. ....	18,769,424	11,302,134	1,440,383	1,258,451	3,364,821	1,403,635
181 Eastern Virginia Med Sch .....	15,818	9,753	0	544	0	5,521
182 U Arkansas Med Sci .....	15,686	10,964	482	1,803	1,039	1,398
183 Ohio University .....	15,452	5,168	2,616	2,201	4,757	710
184 University of Akron .....	15,385	4,328	1,848	5,247	3,705	257
185 University of Montana .....	15,169	7,303	1,091	324	6,044	407
186 U TX Arlington .....	14,834	3,995	4,296	3,363	3,180	0
187 Western Illinois U .....	14,448	10,096	1,416	425	1,734	777
188 U MA Lowell .....	14,292	5,959	2,370	3,691	655	1,617
189 South Dakota State U .....	14,050	5,033	6,875	360	1,210	572
190 Stevens Institute Tech .....	14,004	10,552	922	1,659	871	0
Total, 1st 190 insts. ....	18,918,562	11,375,285	1,462,299	1,278,068	3,388,016	1,414,894
191 Mercer University .....	13,771	10,241	20	399	3,111	0
192 SUNY Binghamton .....	13,760	5,005	1,766	1,312	3,492	2,185
193 Colorado School of Mines .....	13,644	7,050	692	5,770	132	0
194 Brigham Young University .....	13,587	7,967	771	1,678	3,012	159
195 SUNY Hlth Sci Ctr Syrcse .....	13,514	9,878	70	380	0	3,186
196 U TX Dallas .....	13,371	8,031	1,249	969	2,353	769
197 U of South Alabama .....	12,650	8,270	459	1,562	2,359	0
198 U TX El Paso .....	12,480	9,229	2,411	191	175	474
199 Med Col of Ohio Toledo .....	12,285	8,286	610	920	1,842	627
200 Georgia State University .....	12,133	5,826	289	490	4,944	584
Total, 1st 200 insts. ....	19,049,757	11,455,068	1,470,636	1,291,739	3,409,436	1,422,878
Total, all other sampled insts. ....	861,595	502,072	88,311	82,218	142,455	46,539

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:**  
e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-36. R&D expenditures at public universities and colleges,  
by source of funds: fiscal year 1993**

[Dollars in thousands]

Page 1 of 3

Institution ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
Total, all institutions .....	13,368,412	7,173,300	1,416,337	896,707	2,975,005	907,063
1 University of Michigan .....	425,868	249,951	4,891	26,733	104,163	40,130
2 U WI Madison .....	372,362	213,955	60,358	12,392	47,524	38,133
3 University of Washington .....	335,329	268,819	8,211	30,780	20,295	7,224
4 University of Minnesota .....	332,033	174,716	49,861	21,524	64,840	21,092
5 Texas A&M University .....	322,691	122,533	82,284	27,182	85,772	4,920
6 U CA San Francisco .....	314,599	210,148	19,200	9,244	43,910	32,097
7 U CA San Diego .....	307,051	243,149	10,057	10,081	21,768	21,996
8 U CA Berkeley .....	284,346	156,394	28,597	12,269	67,838	19,248
9 Pennsylvania State U .....	282,659	160,152	7,989	41,736	72,782	0
10 U CA Los Angeles .....	277,974	189,065	5,514	13,606	35,305	34,484
Total, 1st 10 insts. ....	3,254,912	1,988,882	276,962	205,547	564,197	219,324
11 University of IL Urbana .....	252,811	141,149	29,247	16,095	56,360	9,960
12 U TX Austin .....	249,158	139,126	17,700	4,106	63,821	24,405
13 University of Arizona .....	235,528	113,423	5,163	13,469	82,094	21,379
14 U MD College Park .....	229,344	85,041	64,562	19,271	60,470	0
15 U CA Davis .....	223,758	105,255	16,240	6,852	78,581	16,830
16 Ohio State University .....	221,460	109,069	29,836	13,647	30,823	38,085
17 University of Colorado .....	193,217	138,584	2,668	12,218	16,101	23,646
18 U of NC Chapel Hill .....	179,157	130,920	18,551	2,539	27,147	0
19 University of Pittsburgh .....	178,575	141,776	848	9,791	13,089	13,071
20 Georgia Institute of Tech .....	175,873	98,398	1,985	28,872	46,618	0
Total, 1st 20 insts. ....	5,393,793	3,191,623	463,762	332,407	1,039,301	366,700
21 University of Georgia .....	172,274	52,085	34,119	8,803	75,959	1,308
22 Rutgers the State U NJ .....	161,025	55,169	24,221	7,734	64,358	9,543
23 Louisiana State U System .....	158,823	52,598	56,400	9,203	30,993	9,629
24 NC State U Raleigh .....	155,624	62,470	50,597	22,229	19,220	1,108
25 Michigan State University .....	150,861	70,294	25,601	6,442	35,159	13,365
26 Purdue University .....	149,032	72,954	17,538	13,174	36,007	9,359
27 U of Iowa .....	148,811	93,483	3,036	10,478	31,562	10,252
28 Iowa St U of Sci & Tech .....	148,459	50,695	35,035	7,402	48,977	6,350
29 U of Tennessee System .....	143,662	76,578	23,361	11,722	22,351	9,650
30 University of Florida .....	142,966	71,704	10,255	11,105	42,536	7,366
Total, 1st 30 insts. ....	6,925,330	3,849,653	743,925	440,699	1,446,423	444,630
31 VA Polytech Inst & St U .....	135,771	61,708	32,055	13,224	25,381	3,403
32 U of Alabama Birmingham .....	133,790	94,762	2,539	10,832	10,204	15,453
33 University of Connecticut .....	133,054	49,051	7,988	8,357	58,275	9,383
34 SUNY Buffalo .....	128,203	80,723	6,333	5,584	19,150	16,413
35 Indiana University .....	127,877	77,377	1,731	4,850	27,391	16,528
36 U TX MD Anderson Cntr Ctr .....	127,475	41,158	0	0	61,565	24,752
37 University of Virginia .....	118,019	75,580	6,103	10,389	13,078	12,869
38 Colorado State University .....	115,385	68,733	14,291	5,369	25,138	1,854
39 U TX SW Med Ctr Dallas .....	114,258	67,943	20	11,173	6,835	28,287
40 Oregon State University .....	114,004	61,118	27,820	4,291	12,110	8,665
Total, 1st 40 insts. ....	8,173,166	4,527,806	842,805	514,768	1,705,550	582,237
41 U MD Baltimore Prof Sch .....	111,772	53,556	22,766	14,420	15,035	5,995
42 SUNY Stony Brook .....	107,817	68,023	1,168	4,670	28,574	5,382
43 U of Missouri Columbia .....	106,193	29,612	13,810	7,907	48,148	6,716
44 University of IL Chicago .....	105,552	50,415	4,886	4,570	32,161	13,520
45 University of Utah .....	105,263	83,237	226	4,357	10,908	6,535
46 University of Kentucky .....	102,911	46,774	6,099	9,924	35,189	4,925
47 U CA Irvine .....	100,631	64,546	5,595	4,898	14,029	11,563
48 U of Nebraska Lincoln .....	94,959	23,930	34,876	2,287	22,995	10,871
49 University of Cincinnati .....	92,512	57,394	1,756	10,621	17,069	5,672
50 Washington State U .....	92,434	43,678	5,482	2,726	32,006	8,542
Total, 1st 50 insts. ....	9,193,210	5,048,971	939,469	581,148	1,961,664	661,958

See explanatory information and SOURCE at end of table.

**Table B-36. R&D expenditures at public universities and colleges,  
by source of funds: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
51 University of Oklahoma .....	92,019	33,298	10,822	3,918	29,884	14,097
52 New Mexico State U .....	85,974	64,821	9,079	3,466	7,751	857
53 Wayne State University .....	85,627	40,367	6,208	7,738	23,126	8,188
54 University of Kansas .....	85,134	37,738	6,164	4,037	33,368	3,827
55 Clemson University .....	78,569	23,299	15,296	6,035	29,579	4,360
56 Utah State University .....	77,263	45,426	12,078	3,268	15,333	1,158
57 Virginia Commonwealth U .....	77,097	48,777	2,162	6,591	17,248	2,319
58 University of New Mexico .....	76,736	42,866	2,657	5,474	14,383	11,356
59 U Med & Dent NJ .....	76,410	35,524	5,195	7,431	21,017	7,243
60 U of South Florida .....	75,322	16,718	6,033	5,041	41,121	6,409
Total, 1st 60 insts. ....	10,003,361	5,437,805	1,015,163	634,147	2,194,474	721,772
61 U TX Hlth Sci Ctr San Ant ....	75,239	48,467	6,178	6,746	10,019	3,829
62 University Hawaii Manoa .....	73,961	41,362	27,099	151	3,109	2,240
63 Oklahoma State University .....	72,920	20,840	10,232	3,531	35,992	2,325
64 Mississippi State U .....	70,300	29,616	19,435	6,012	8,195	7,042
65 U CA Santa Barbara .....	68,775	54,057	1,663	2,487	6,455	4,113
66 Auburn University .....	68,151	17,438	22,571	6,059	16,736	5,347
67 U TX Med Br Galveston .....	67,998	30,555	7,809	4,831	16,344	8,459
68 U of Alaska Fairbanks .....	66,796	41,616	3,012	4,751	17,412	5
69 Arizona State University .....	66,142	30,032	997	4,772	28,620	1,721
70 U MA Amherst .....	64,111	32,065	4,889	5,288	15,482	6,387
Total, 1st 70 insts. ....	10,697,754	5,783,853	1,119,048	678,775	2,352,838	763,240
71 Florida State University .....	62,929	38,690	2,325	1,377	18,491	2,046
72 KS St U Agri & App Sci .....	62,562	19,582	27,845	2,889	10,708	1,538
73 U CA Riverside .....	59,065	19,126	3,641	1,208	31,601	3,489
74 U TX Hlth Sci Ctr Houston ....	58,786	38,664	1,448	6,907	4,247	7,520
75 U Arkansas Fayetteville .....	58,325	14,398	23,184	4,964	13,735	2,044
76 U of South Carolina .....	57,062	28,250	761	6,414	19,016	2,621
77 Oregon Health Sciences U .....	56,860	38,913	50	992	13,446	3,459
78 University of Houston .....	55,038	34,350	11,034	1,339	5,662	2,653
79 U MA Worcester .....	54,277	32,485	153	3,721	17,918	0
80 West Virginia University .....	54,271	31,092	2,004	3,973	13,952	3,250
Total, 1st 80 insts. ....	11,276,929	6,079,403	1,191,493	712,559	2,501,614	791,860
81 Temple University .....	53,686	26,548	316	6,011	18,279	2,532
82 University of Delaware .....	52,627	26,170	3,710	4,857	13,937	3,953
83 U of VT & State Agri Col .....	49,839	31,530	2,666	4,573	8,253	2,817
84 U of Rhode Island .....	45,942	32,609	2,674	1,387	9,152	120
85 University of Idaho .....	44,655	15,877	12,290	5,608	10,502	378
86 Med U of South Carolina .....	42,543	21,471	0	1,793	4,255	15,024
87 U of New Hampshire .....	39,555	23,635	1,390	1,467	8,910	4,153
88 U of Nevada Reno .....	38,564	17,097	1,024	1,033	18,741	669
89 Texas Tech University .....	38,119	10,897	10,987	5,284	8,803	2,148
90 U CA Santa Cruz .....	37,886	21,821	1,961	458	9,719	3,927
Total, 1st 90 insts. ....	11,720,345	6,307,058	1,228,511	745,030	2,612,165	827,581
91 SUNY Albany .....	37,860	27,318	130	1,240	4,859	4,313
92 North Dakota State U .....	34,971	8,756	1,399	1,191	22,219	1,406
93 U of Alabama Huntsville .....	34,153	24,983	1,257	2,857	5,056	0
94 U of Central Florida .....	33,922	12,527	3,204	5,810	12,381	0
95 Montana State University .....	32,911	14,096	7,938	2,910	7,967	0
96 University of Wyoming .....	32,556	14,575	4,111	2,268	10,637	965
97 San Diego St University .....	32,493	16,862	7,181	1,418	4,992	2,040
98 U of NE Med Ctr Omaha .....	31,669	10,131	4,632	3,488	11,528	1,890
99 Unif Svcs U of Hlth Sci .....	30,846	22,319	0	0	8,527	0
100 University of Oregon .....	30,738	21,465	672	545	5,573	2,483
Total, 1st 100 insts. ....	12,052,464	6,480,090	1,259,035	766,757	2,705,904	840,678

See explanatory information and SOURCE at end of table.



**Table B-36. R&D expenditures at public universities and colleges,  
by source of funds: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
101 SUNY Hlth Sci Ctr Brklyn .....	27,645	17,916	324	4,421	3,293	1,691
102 Sthrn IL U Carbondale .....	26,376	7,437	6,071	2,033	9,062	1,773
103 Medical Col of Georgia .....	24,935	7,713	404	2,777	12,394	1,647
104 U of Maine Orono .....	24,879	8,959	1,711	4,117	9,674	418
105 US Naval Postgrad School ..	24,296	23,640	141	341	0	174
106 NM Inst Mining & Tech .....	24,040	5,373	2,262	9,803	6,373	229
107 NJ Inst of Technology .....	23,781	8,275	5,314	3,459	5,878	855
108 University of Mississippi .....	23,734	14,917	2,221	2,727	2,507	1,362
109 U of PR Mayaguez .....	23,156	8,487	7,629	382	5,560	1,098
110 The University of Alabama ...	23,149	8,583	165	2,419	11,982	0
Total, 1st 110 insts. ....	12,298,455	6,591,390	1,285,277	799,236	2,772,627	849,925
111 Florida A&M University .....	22,777	18,954	2,320	1,503	0	0
112 SUNY Col Env Sci & Frstry ..	21,856	3,177	762	2,010	15,201	706
113 Col of William & Mary .....	21,793	10,335	1,285	1,117	8,626	430
114 Desert Research Institute .....	21,187	15,514	1,887	3,293	493	0
115 San Jose State University ....	21,005	11,825	2,537	4,324	1,655	664
116 Wright State University .....	20,589	10,081	1,833	539	5,828	2,308
117 CUNY City College .....	20,401	14,785	599	1,327	0	3,690
118 University of Louisville .....	19,496	8,924	99	3,651	5,839	983
119 U of Nevada Las Vegas .....	19,373	10,585	1,450	919	5,959	460
120 University North Dakota .....	19,204	16,467	133	982	1,376	246
Total, 1st 120 insts. ....	12,506,136	6,712,037	1,298,182	818,901	2,817,604	859,412
121 U MD Center for EES .....	19,055	5,413	3,015	115	9,142	1,370
122 Michigan Tech University .....	18,696	9,777	852	3,127	4,940	0
123 U WI Milwaukee .....	18,245	7,455	6,710	452	2,348	1,280
124 U of Missouri Rolla .....	18,025	6,128	690	1,717	7,049	2,441
125 U of PR Med Sci Campus ....	17,574	13,821	543	0	2,090	1,120
126 George Mason University ....	15,830	9,366	969	1,654	2,656	1,185
127 U Arkansas Med Sci .....	15,686	10,964	482	1,803	1,039	1,398
128 Ohio University .....	15,452	5,168	2,616	2,201	4,757	710
129 University of Akron .....	15,385	4,328	1,848	5,247	3,705	257
130 University of Montana .....	15,169	7,303	1,091	324	6,044	407
Total, 1st 130 insts. ....	12,675,253	6,791,760	1,316,998	835,541	2,861,374	869,580
131 U TX Arlington .....	14,834	3,995	4,296	3,363	3,180	0
132 Western Illinois U .....	14,448	10,096	1,416	425	1,734	777
133 U MA Lowell .....	14,292	5,959	2,370	3,691	655	1,617
134 South Dakota State U .....	14,050	5,033	6,875	360	1,210	572
135 SUNY Binghamton .....	13,760	5,005	1,766	1,312	3,492	2,185
136 Colorado School of Mines ....	13,644	7,050	692	5,770	132	0
137 SUNY Hlth Sci Ctr Syracuse ..	13,514	9,878	70	380	0	3,186
138 U TX Dallas .....	13,371	8,031	1,249	969	2,353	769
139 U of South Alabama .....	12,650	8,270	459	1,562	2,359	0
140 U TX El Paso .....	12,480	9,229	2,411	191	175	474
Total, 1st 140 insts. ....	12,812,296	6,864,306	1,338,602	853,564	2,876,664	879,160
141 Med Col of Ohio Toledo .....	12,285	8,286	610	920	1,842	627
142 Georgia State University .....	12,133	5,826	289	490	4,944	584
143 NC A&T State University .....	12,090	8,759	1,299	264	885	883
144 Kent State University .....	12,075	6,363	1,389	155	3,458	710
145 Old Dominion University .....	11,875	6,914	3,711	1,250	0	0
146 Memphis State University ....	11,740	3,504	3,350	198	4,024	664
147 Florida International U .....	11,443	9,289	1,013	366	514	261
148 Florida Atlantic U .....	11,331	5,655	3,172	2,504	0	0
149 U of Southwestern LA .....	11,319	1,130	2,662	54	6,234	1,239
150 Northern Illinois U .....	11,215	5,663	137	1,317	4,098	0
Total, 1st 150 insts. ....	12,929,802	6,925,695	1,356,234	861,082	2,902,663	884,128
Total, all other sampled insts. ....	438,610	247,605	60,103	35,625	72,342	22,935

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-37. R&D expenditures at private universities and colleges,  
by source of funds: fiscal year 1993**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
Total, all institutions .....	6,542,940	4,783,840	142,610	477,250	576,886	562,354
1 Johns Hopkins U .....	745,515	673,601	1,205	12,564	31,944	26,201
2 MA Institute of Tech .....	365,553	267,414	3,058	58,106	8,139	28,836
3 Cornell University .....	310,949	195,229	41,770	15,789	32,619	25,542
4 Stanford University .....	306,676	254,379	1,188	15,337	18,703	17,069
5 Harvard University .....	257,207	181,969	358e	9,319e	14,610e	50,951
6 U of Pennsylvania .....	233,829	173,593	2,364	11,440	19,649	26,783
7 Yale University .....	226,850	168,900	1,698	9,994	21,188	25,070
8 Columbia U Main Division .....	204,710	182,696	1,548	5,919	3,683	10,864
9 Duke University .....	202,434	136,377	3,684	34,572	13,786	14,015
10 U of Southern California .....	200,822	149,965	10,392	13,444	27,021	0
Total, 1st 10 insts. ....	3,054,545	2,384,123	67,265	186,484	191,342	225,331
11 Washington University .....	179,329	129,482	3,599	19,388	13,563	13,297
12 Baylor Col of Medicine .....	172,252	87,623	3,215	9,914	21,171	50,329
13 University of Rochester .....	161,810	130,898	6,847	7,868	3,723	12,474
14 Northwestern University .....	154,227	77,687	1,358	8,784	49,200	17,198
15 New York University .....	129,774	93,633	1,405	4,917	10,475	19,344
16 Case Western Reserve U ....	124,691	91,867	3,648	6,480	9,833	12,863
17 University of Miami .....	120,875	91,472	1,772	10,828	4,536	12,267
18 Emory University .....	120,125	80,424	2,394	8,145	18,464	10,698
19 Carnegie Mellon U .....	118,261	78,666	5,699	18,180	6,680	9,036
20 California Inst of Tech .....	115,439	103,888	762	3,835	4,411	2,543
Total, 1st 20 insts. ....	4,451,328	3,349,763	97,964	284,823	333,398	385,380
21 University of Chicago .....	111,877	95,930	165	1,958	4,913	8,911
22 Princeton University .....	98,603	56,746	847	5,866	24,197	10,947
23 Vanderbilt University .....	96,181	83,683	263	2,523	4,837	4,875
24 Boston University .....	91,158	71,593	994	9,982	0	8,589
25 Yeshiva University .....	89,636	71,771	0	1,780	11,025	5,060
26 Woods Hole Ocngrphc Inst ..	81,519	73,546	429	644	1,245	5,655
27 Tulane University .....	75,634	36,940	2,164	6,618	23,581	6,331
28 CUNY Mt Sinai Sch of Med ..	75,337	49,800	1,280	5,549	8,249	10,459
29 Rockefeller University .....	74,396	36,854	28	4,907	16,181	16,426
30 Georgetown University .....	73,785	48,463	58	5,914	12,595	6,755
Total, 1st 30 insts. ....	5,319,454	3,975,089	104,192	330,564	440,221	469,388
31 Dartmouth College .....	59,920	44,092	4,456	3,375	2,858	5,139
32 Wake Forest University .....	57,646	41,861	309	8,333	3,677	3,466
33 Brown University .....	57,152	38,851	138	1,825	14,284	2,054
34 Tufts University .....	56,976	46,625	11	9,328e	985e	27e
35 Thomas Jefferson U .....	51,106	38,293	0	12,813	0	0
36 Medical Col of Wisconsin .....	48,689	31,261	1,277	5,053	3,164	7,934
37 University of Dayton .....	45,052	38,333	260	4,813	1,578	68
38 Rensselaer Polytech Inst .....	44,132	22,106	4,396	10,813	2,310	4,507
39 George Washington U .....	41,177	27,698	427	2,168	3,702	7,182
40 Brandeis University .....	36,213	21,825	120	0	4,520	9,748
Total, 1st 40 insts. ....	5,817,517	4,326,034	115,586	389,085	477,299	509,513
41 Rush University .....	34,039	12,787	1,150	5,036	8,817	6,249
42 Syracuse University .....	32,443	16,818	3,786	2,166	6,551	3,122
43 Lehigh University .....	30,869	16,038	1,403	8,088	4,411	929
44 Rice University .....	30,403	22,016	2,336	4,550	0	1,501
45 Loyola U of Chicago .....	29,232	18,230	537	3,614	2,844	4,007
46 The Medical Col of PA .....	24,996	16,990	57	3,681	3,563	705
47 University of Notre Dame .....	23,745	16,415	1,147	4,024	2,159	0
48 St Louis University .....	20,826	18,583	182	1,054	255	752
49 Drexel University .....	20,314	11,335	1,270	4,233	3,476	0
50 Northeastern University .....	18,517	15,339	325	1,445	144	1,264
Total, 1st 50 insts. ....	6,082,901	4,490,585	127,779	426,976	509,519	528,042

See explanatory information and SOURCE at end of table.

**Table B-37. R&D expenditures at private universities and colleges,  
by source of funds: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
51 New York Medical College .....	18,491	13,468	362	1,480	0	3,181
52 Howard University .....	18,427	14,819	540	434	1,418	1,216
53 Oregon Grad Inst Sci Tech ..	18,288	9,591	713	2,638	2,145	3,201
54 Hahnemann University .....	17,756	9,674	28	957	5,910	1,187
55 Eastern Virginia Med Sch .....	15,818	9,753	0	544	0	5,521
56 Stevens Institute Tech .....	14,004	10,552	922	1,659	871	0
57 Mercer University .....	13,771	10,241	20	399	3,111	0
58 Brigham Young University .....	13,587	7,967	771	1,678	3,012	159
59 Clark Atlanta University .....	12,057	10,484	114	190	1,269	0
60 Albany Medical College .....	11,845	8,564	0	38	2,993	250
Total, 1st 60 insts. ....	6,236,945	4,595,698	131,249	436,993	530,248	542,757
61 Worcester Polytech Inst .....	11,484	9,164	150	957	1,054	159
62 Boston College .....	10,731	8,151	75	286	1,060	1,159
63 Clarkson University .....	10,586	5,795	877	1,455	2,459	0
64 Polytechnic University .....	9,424	6,394	1,271	1,420e	273	66e
65 Meharry Medical College .....	9,283	9,074	0	0	0	209
66 Creighton University .....	9,109	3,962	68	3,116	1,883	80
67 Loma Linda University .....	9,030	4,963	0	2,228	1,424	415
68 University of Denver .....	8,595	7,555	358	284	398	0
69 Inst Paper Sci and Tech .....	8,344	1,311	0	1,726	4,473	834
70 Illinois Inst of Tech .....	8,252	6,349	509	1,031	363	0
Total, 1st 70 insts. ....	6,331,783	4,658,416	134,557	449,496	543,635	545,679
71 Catholic U of America .....	7,926	5,796	0	1,690	440	0
72 University of Tulsa .....	7,889	2,337	1,345	2,761	1,442	4
73 Morehouse School of Med .....	7,448	6,597	0	566	277	8
74 Southern Methodist U .....	7,037	4,932	371	136	1,216	382
75 Finch U Hlth Sci Chicago .....	6,928	5,033	0	94	831	970
76 C R Drew U of Med & Sci .....	6,852	6,483	0	369	0	0
77 Rochester Inst of Tech .....	6,331	1,561	163	1,504	3,103	0
78 Florida Inst of Tech .....	5,866	1,903	1,388	1,884	349	342
79 Tuskegee University .....	5,500	5,154	0	138	144	64
80 Marquette University .....	4,896	2,524	65	801	689	817
Total, 1st 80 insts. ....	6,398,456	4,700,736	137,889	459,439	552,126	548,266
81 Wesleyan University .....	4,804	2,611	381	0	1,366	446
82 Hampton University .....	4,597	4,597	0	0	0	0
83 Alfred University .....	4,479	797	1,050	1,897	664	71
84 American University .....	3,903	3,569	13	107	191	23
85 Gallaudet University .....	3,535	2,944	0	0	0	591
86 Texas Christian U .....	3,170	2,693	0	409	68	0
87 Xavier University of LA .....	3,169	3,145	0	24	0	0
88 Forest Inst of Prof Psy .....	2,717	0	0	0	2,717	0
89 Ponce School of Medicine .....	2,591	2,436	66	0	32	57
90 Institute of Textile Tech .....	2,412	0	0	2,284	128	0
Total, 1st 90 insts. ....	6,433,833	4,723,528	139,399	464,160	557,292	549,454
91 Clark University .....	2,311	1,717	0	0	9	585
92 Bryn Mawr College .....	2,310	1,277	0	28	1,005	0
93 Occidental College .....	2,220	1,513e	94e	198e	230e	185e
94 Embry Riddle Aeronautci U ..	2,124	1,614	88	25	397	0
95 U of Detroit Mercy .....	2,069	770	0	1,252	47	0
96 U Ctrl Del Caribe Esc Med .....	1,977	1,426	396	0	153	2
97 Harvey Mudd College .....	1,944	352	0	1,228	212	152
98 Williams College .....	1,853	1,010	0	0	843	0
99 Santa Clara University .....	1,815	422	0	452	887	54
100 Fordham University .....	1,737	1,006	193	0	0	538
Total, 1st 100 insts. ....	6,454,193	4,734,635	140,170	467,343	561,075	550,970
Total, all other sampled insts. ....	88,747	49,205	2,440	9,907	15,811	11,384

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-38. Industry-sponsored R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 4

Institution ranking	1993	1992	1991	1990	1989	1988	1987	1986
Total, all institutions .....	1,373,957	1,291,352	1,204,628	1,127,702	994,859	872,288	790,093	699,690
1 MA Institute of Tech .....	58,106	49,828	45,712	43,460	39,650	33,256	35,064	34,764
2 Pennsylvania State U .....	41,736	42,693	37,587	34,806	30,256	24,068	20,114	16,905
3 Duke University .....	34,572	31,977	22,876	12,252	12,551	12,379	8,085	7,300
4 University of Washington .....	30,780	26,442	26,033	22,215	19,135	16,580	18,564	16,493
5 Georgia Institute of Tech .....	28,872	23,776	22,496	21,256	21,346	21,567	23,628	21,944
6 Texas A&M University .....	27,182	28,675	23,050	26,197	21,204	18,534	13,398	7,944
7 University of Michigan .....	26,733	24,992	24,717	27,128	22,023	14,782	14,451	12,481
8 NC State U Raleigh .....	22,229	20,342	20,961	21,398	21,735	18,580	11,748	10,452
9 University of Minnesota .....	21,524	17,529	19,270	18,086	12,389	10,670	11,056	11,157
10 Washington University .....	19,388	15,192	16,442	14,132	13,500	12,839	12,016	11,352
Total, 1st 10 insts. ....	311,122	281,446	259,144	240,930	213,789	183,255	168,124	150,792
11 U MD College Park .....	19,271	15,757	11,938	14,229 i	12,940 i	11,451 i	10,149 e	8,124 e
12 Carnegie Mellon U .....	18,180	19,003	20,438	20,295	18,976	17,092	16,130	17,591
13 University of IL Urbana .....	16,095	20,070	24,434	20,762	15,785	13,686	11,414	8,831
14 Cornell University .....	15,789	13,879	16,761	16,620	16,627	15,806	17,169	14,256
15 Stanford University .....	15,337	14,454	11,935	12,931	13,764	11,628	10,979	8,833
16 U MD Baltimore Prof Sch .....	14,420	13,724	11,898	12,791	11,183	8,017	7,652	6,827
17 Ohio State University .....	13,647	13,994	15,409	14,744	20,244	10,910	9,278	7,826
18 U CA Los Angeles .....	13,606	14,671	8,619	8,310	7,548	8,492	14,360	12,659
19 University of Arizona .....	13,469	12,292	12,091	10,246	9,729	12,245	11,638	11,158
20 U of Southern California .....	13,444	15,529	13,852	18,896	14,716	11,805	9,999	6,376
Total, 1st 20 insts. ....	464,380	434,819	406,519	390,754	355,301	304,387	286,892	253,273
21 VA Polytech Inst & St U .....	13,224	14,333	12,443	11,394	9,825	9,058	7,010	6,463
22 Purdue University .....	13,174	12,607	11,962	11,632	11,451	10,325	9,579	8,776
23 Thomas Jefferson U .....	12,813	12,468	9,966	8,518	8,094	7,465	6,287	5,095
24 Johns Hopkins U .....	12,564	13,296	14,953	14,961	11,013	9,247	7,755	3,538
25 U WI Madison .....	12,392	12,912	12,624	12,123	11,035	9,556	8,586	8,007
26 U CA Berkeley .....	12,269	12,553	11,970	10,892	8,480	8,267	6,580	6,143
27 University of Colorado .....	12,218	10,655	8,251	7,426	6,728	5,234	4,502	3,567
28 U of Tennessee System .....	11,722	8,479	8,857	7,199	6,515	7,225	5,662	4,286
29 U of Pennsylvania .....	11,440	10,034	7,171	11,973	9,582	6,230	7,483	7,299
30 U TX SW Med Ctr Dallas .....	11,173	10,874	9,330	8,537	6,938	5,915	5,566	4,295
Total, 1st 30 insts. ....	587,369	553,030	514,046	495,409	444,962	382,909	355,902	310,742
31 University of Florida .....	11,105	11,849	13,376	12,237	10,579	8,529	9,404	7,902
32 U of Alabama Birmingham .....	10,832	8,907	7,867	7,241	6,602	6,153	4,544	4,508
33 University of Miami .....	10,828	8,566	6,593	5,366	4,702	4,907	7,300	8,897
34 Rensselaer Polytech Inst .....	10,813	12,161	12,236	11,418	9,066	9,014	8,006	5,813 i
35 University of Cincinnati .....	10,621	4,685	4,050	4,468	4,160	3,449	2,299	1,655
36 U of Iowa .....	10,478	13,545	7,828	6,827	10,301	5,527	2,615	1,706
37 University of Virginia .....	10,389	8,296	8,153	6,406	5,768	4,733	3,260	2,941
38 U CA San Diego .....	10,081	7,485	11,225	9,135	6,824	5,055	5,902	5,995
39 Yale University .....	9,994	9,442	8,700	7,014	6,563	5,649	5,563	1,790
40 Boston University .....	9,982	8,437	6,405	4,608	2,555	2,379	2,276	2,076
Total, 1st 40 insts. ....	692,492	646,403	600,479	570,129	512,082	438,304	407,071	354,025
41 University of Kentucky .....	9,924	9,253	7,476	6,720	5,819	4,191	6,312	8,173
42 Baylor Col of Medicine .....	9,914	6,630	7,294	7,746	7,263	5,329	4,879	3,772
43 NM Inst Mining & Tech .....	9,803	9,616	9,907 i	10,194	7,695	6,853	5,418	3,335
44 University of Pittsburgh .....	9,791	7,873	7,110	6,481	9,406	8,738	6,547	5,428
45 Tufts University .....	9,328 e	7,668 e	7,740 e	7,761 e	8,010 e	8,375	6,314 e	982 i
46 Harvard University .....	9,319 e	11,647 e	11,957	10,565 e	10,461 e	9,093 e	7,778 e	6,723 e
47 U CA San Francisco .....	9,244	6,573	5,475	5,276	6,226	5,127	4,008	4,119
48 Louisiana State U System .....	9,203	9,657	8,616	3,759	2,120	2,348	1,481	998
49 University of Georgia .....	8,803	6,679	5,821	5,797	4,877	5,659	4,982	4,360
50 Northwestern University .....	8,784	6,978	6,960	5,989	5,289	3,532	3,101	2,256
Total, 1st 50 insts. ....	786,605	728,977	678,835	640,417	579,248	497,549	457,891	394,171

See explanatory information and SOURCE at end of table.

**Table B-38. Industry-sponsored R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

Page 2 of 4

Institution ranking	1993	1992	1991	1990	1989	1988	1987	1986
51 University of Connecticut .....	8,357	5,831	7,421	6,388	4,996	4,310	3,729	4,090
52 Wake Forest University .....	8,333	6,392	5,927	5,642	4,859	4,183	2,402	1,768i
53 Emory University .....	8,145	7,465	6,920	7,170	6,169	4,701	3,350	2,427
54 Lehigh University .....	8,088	7,467	8,133	8,030	7,596	7,479	6,731	5,514
55 U of Missouri Columbia .....	7,907	7,612	9,537	9,130	6,434	4,252	4,206	4,562
56 University of Rochester .....	7,868	9,085	6,814	6,419	4,913	4,705	6,267	6,714
57 Wayne State University .....	7,738	7,486	7,295	5,875	3,850	2,897	2,761	1,717
58 Rutgers the State U NJ .....	7,734	7,889	7,769	6,754	6,087	4,498	3,087	2,594
59 U Med & Dent NJ .....	7,431	5,337	3,471	2,908	2,583	1,983	1,421	1,322e
60 Iowa St U of Sci & Tech .....	7,402	8,011	6,537	5,525	4,408	3,961	3,597	3,043
Total, 1st 60 insts. ....	865,608	801,552	748,659	704,258	631,143	540,518	495,442	427,922
61 U TX Hlth Sci Ctr Houston ...	6,907	5,144	6,392	5,142	3,266	3,385	3,494	3,661
62 U CA Davis .....	6,852	6,125	6,599	7,461	8,039	6,975	5,324	4,510
63 U TX Hlth Sci Ctr San Ant ...	6,746	5,268	6,876	6,166	5,535	4,908	4,404	4,302
64 Tulane University .....	6,618	7,462	6,758	5,952	5,577	4,518	4,945	4,689
65 Virginia Commonwealth U ...	6,591	6,285	6,201	4,835	3,910	3,283	3,192	2,195
66 Case Western Reserve U ....	6,480	6,851	4,667	4,954	2,915	3,975	3,433	2,992
67 Michigan State University ....	6,442	6,304	4,693	4,557	4,068	3,615	3,137	2,969
68 U of South Carolina .....	6,414	9,019	7,625	3,072	1,968	3,053	1,531	1,566
69 Auburn University .....	6,059	6,807	6,450	5,541	4,111	2,615	3,112	2,805
70 Clemson University .....	6,035	7,174	6,163	7,595	3,849	3,791	3,105	2,963
Total, 1st 70 insts. ....	930,752	867,991	811,083	759,533	674,381	581,536	531,119	460,574
71 Mississippi State U' .....	6,012	6,920	7,163	6,389	3,886	3,430	2,823	2,081
72 Temple University .....	6,011	4,155	3,452	2,707	2,544	3,699	0	0
73 Columbia U Main Division ....	5,919	6,454	6,619	5,618	5,408	4,841	3,915	4,086
74 Georgetown University .....	5,914	4,947	4,549	3,362	4,370	2,972	2,536	1,906
75 Princeton University .....	5,866	4,322	4,595	4,964	5,640	4,487	4,122	2,989
76 U of Central Florida .....	5,810	3,947	4,287	3,813	2,580	1,864	1,990i	1,940i
77 Colorado School of Mines ....	5,770	5,542	4,847	4,060	3,793	2,647	1,995	2,516
78 University of Idaho .....	5,608	4,064	4,447	3,731	3,788	3,339	2,630	2,670
79 SUNY Buffalo .....	5,584	7,831	3,086	2,118	1,759	1,178	779	234
80 CUNY Mt Sinai Sch of Med ...	5,549	4,642	3,978	4,053	3,732	2,982	2,870	950
Total, 1st 80 insts. ....	988,795	920,815	858,106	800,348	711,881	612,975	554,779	479,946
81 University of New Mexico .....	5,474	8,886	4,684	4,022	2,496	1,140	4,858	4,450
82 Colorado State University ....	5,369	5,074	3,380	2,883	2,432	1,525	1,178	1,423
83 U MA Amherst .....	5,288	5,466	--	--	--	--	--	--
84 Texas Tech University .....	5,284	4,815	4,428	4,391	4,393	4,229	3,857	3,967
85 University of Akron .....	5,247	4,697	3,813	3,873	2,591	2,422	2,426	2,256
86 Medical Col of Wisconsin .....	5,053	4,684	4,175	3,189	3,684	3,243	2,018	1,422
87 U of South Florida .....	5,041	5,127	6,091	4,250	327	144	117	84
88 Rush University .....	5,036	3,218	4,092	3,622	3,714	2,139	1,320	1,447
89 U Arkansas Fayetteville .....	4,964	4,051	3,323	2,947	2,444	3,112	2,353	2,585
90 New York University .....	4,917	4,588	5,947	5,260	4,066	3,677	3,036	4,292
Total, 1st 90 insts. ....	1,040,468	971,421	898,039	834,785	738,028	634,606	575,942	501,872
91 Rockefeller University .....	4,907	4,623	4,816	4,918	3,453	3,764	3,476	3,321
92 U CA Irvine .....	4,898	3,825	4,163	3,115	4,582	5,181	4,722	4,295
93 University of Delaware .....	4,857	5,075	4,732	4,397	4,073	3,558	3,659	3,551
94 Indiana University .....	4,850	3,569	2,367	2,316	2,591	2,658	4,597	3,325
95 U TX Med Br Galveston .....	4,831	3,978	2,652	2,260	1,847	1,781	1,146	1,274i
96 University of Dayton .....	4,813	4,307	4,359	4,790	4,164	4,013	3,335	2,786
97 Arizona State University .....	4,772	5,790	6,860	7,354	2,382	2,832	5,575	3,061
98 U of Alaska Fairbanks .....	4,751	3,275	1,547	4,100	3,039	2,672e	3,024i	2,936i
99 SUNY Stony Brook .....	4,670	2,890	2,783	2,426	3,093	1,624	1,269	1,382
100 U of VT & State Agri Col .....	4,573	4,337	4,181	3,473	3,486	3,139	2,877	3,331
Total, 1st 100 insts. ....	1,088,390	1,013,090	936,499	873,934	770,738	665,828	609,622	531,134

See explanatory information and SOURCE at end of table.



**Table B-38. Industry-sponsored R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

Page 3 of 4

Institution ranking	1993	1992	1991	1990	1989	1988	1987	1986
101 University of IL Chicago .....	4,570	3,539	4,844	5,157	5,333	2,664	1,728	1,490
102 Rice University .....	4,550	4,147	3,600	3,616	3,232	1,195	1,182i	1,066i
103 SUNY Hlth Sci Ctr Brklyn .....	4,421	3,256	732	1,084	1,425	1,054	897	653i
104 University of Utah .....	4,357	4,124	2,908	3,443	2,700	2,248	2,268	1,819
105 San Jose State University .....	4,324	5,498	588	599	609	595	878i	779i
106 Oregon State University .....	4,291	3,115	3,776	3,167	2,285	1,944	1,890	4,650i
107 Drexel University .....	4,233	3,429	2,873	3,888	4,202	2,928	2,468	2,940
108 U of Maine Orono .....	4,117	3,545	4,719	4,663	4,002	2,823	2,051	2,856
109 U TX Austin .....	4,106	4,814	5,734	3,507	2,694	3,175	3,161	2,677
110 University of Kansas .....	4,037	4,877	4,228	4,473	2,809	2,934	3,259	2,527
Total, 1st 110 insts. ....	1,131,396	1,053,434	970,501	907,531	800,029	687,388	629,404	552,591
111 University of Notre Dame .....	4,024	4,658	4,952	3,965	4,204	3,114	2,824	2,743
112 West Virginia University .....	3,973	5,585	11,163	10,082	3,953	754	862	899
113 University of Oklahoma .....	3,918	4,319	3,530	2,562	1,991	1,950	2,026	2,513
114 California Inst of Tech .....	3,835	3,280	2,764	2,268	3,567	3,273	3,436	3,806
115 U MA Worcester .....	3,721	3,485	--	--	--	--	--	--
116 U MA Lowell .....	3,691	3,770	3,599	3,892	2,849	2,626	1,201	816
117 The Medical Col of PA .....	3,681	2,938	2,496	1,263	0	0	0	321i
118 University of Louisville .....	3,651	3,547	3,093	1,403	1,697	400	403	0
119 Loyola U of Chicago .....	3,614	3,442	1,545	1,398	1,305	475	407	639
120 Oklahoma State University ..	3,531	3,132	2,473	1,963	1,645	3,761	3,170	3,054
Total, 1st 120 insts. ....	1,169,035	1,091,590	1,006,116	936,327	821,240	703,741	643,733	567,382
121 U of NE Med Ctr Omaha .....	3,488	2,163	1,682	1,595	1,194	792	583	558
122 New Mexico State U .....	3,466	3,958	4,939	7,293	6,242	7,844	9,847	6,985
123 NJ Inst of Technology .....	3,459	2,173	2,018	1,710	1,125	1,001	1,026	680
124 Dartmouth College .....	3,375	2,638	2,719	2,251	1,768	1,273	1,024	930i
125 U TX Arlington .....	3,363	2,351	2,884	2,286	2,407	1,858	1,138	776
126 Desert Research Institute ....	3,293	4,466	3,670	3,329	3,079	2,868	3,289	2,972
127 Utah State University .....	3,268	5,167	2,155	2,089	1,315	1,529	1,316	1,440
128 Michigan Tech University .....	3,127	2,946	4,150	3,999	3,584	2,901	2,740	2,490
129 Creighton University .....	3,116	2,654	3,357e	3,886e	5,229	5,589	4,143i	2,793i
130 Montana State University .....	2,910	2,983	4,043	3,833	2,902	2,770	2,454i	2,138
Total, 1st 130 insts. ....	1,201,900	1,123,089	1,037,733	968,598	850,085	732,166	671,293	589,144
131 KS St U Agri & App Sci .....	2,889	2,586	2,389	2,483	1,790	2,031	1,515	779
132 U of Alabama Huntsville .....	2,857	1,963	1,847	2,529	2,170	1,369	992	914
133 Medical Col of Georgia .....	2,777	2,090	1,731	1,920	1,810	1,078	1,011	955
134 University of Tulsa .....	2,761	2,649	2,548	2,330	2,020	2,093	1,808i	1,457i
135 University of Mississippi .....	2,727	1,742	1,366	1,250	1,085	998	766	441
136 Washington State U .....	2,726	2,459	2,074	2,523	2,258	3,335	2,619	2,261
137 Oregon Grad Inst Sci Tech ..	2,638	2,244	1,673	1,591	1,573	1,225	1,722	1,746i
138 U of NC Chapel Hill .....	2,539	3,298	3,677	2,179	579	409	509	1,138
139 Vanderbilt University .....	2,523	3,794	1,941	2,313	2,759	7,938	5,313	4,356
140 Florida Atlantic U .....	2,504	1,943	1,736	639	626	1,023	999	742
Total, 1st 140 insts. ....	1,228,841	1,147,857	1,058,715	988,355	866,755	753,665	688,547	603,933
141 U CA Santa Barbara .....	2,487	2,447	2,379	2,655	2,645	2,108	1,970	2,097
142 The University of Alabama ...	2,419	2,240	2,396	1,798	2,082	1,448	1,354	1,800
143 U of Nebraska Lincoln .....	2,287	3,712	2,806	3,394	2,675	2,204	1,938	1,985
144 Institute of Textile Tech .....	2,284	2,143	2,045	1,869	1,311	1,678	1,238	1,172i
145 University of Wyoming .....	2,268	2,841	2,000	2,001	1,535	1,800	1,216	1,779
146 Loma Linda University .....	2,228	2,750	2,508	3,266	1,964	1,390	420	323i
147 Ohio University .....	2,201	1,779	839	454	393	100	62	88
148 George Washington U .....	2,168	1,181	1,248	988	1,100	990	359	399i
149 Syracuse University .....	2,166	5,195	4,405	3,851	3,937	2,595	3,975	7,397
150 East Carolina University .....	2,109	1,470	1,498	1,692	1,584	1,044	1,029	856
Total, 1st 150 insts. ....	1,251,458	1,173,615	1,080,839	1,010,323	885,981	769,022	702,108	621,829

See explanatory information and SOURCE at end of table.

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**Table B-38. Industry-sponsored R&D expenditures at universities and colleges:  
fiscal years 1986-93**

[Dollars in thousands]

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Institution ranking	1993	1992	1991	1990	1989	1988	1987	1986
151 Sthrn IL U Carbondale .....	2,033	2,004	2,190	1,884	1,504	1,117	1,191	1,595
152 SUNY Col Env Sci & Frstry ..	2,010	1,793	1,707	1,867	1,716	1,493	1,153	991 i
153 University of Chicago .....	1,958	1,399	1,425	1,202	1,520	1,814	1,812	1,203
154 University of Toledo .....	1,956	1,798	1,861	1,885	1,152	703	481 i	260
155 Alfred University .....	1,897	1,988	1,720	1,672	1,475	1,432	1,323	984
156 Florida Inst of Tech .....	1,884	1,575	1,942	1,205	567	518	216	415
157 Brown University .....	1,825	1,882	2,497	3,307	4,291	5,086	4,250	3,848
158 U Arkansas Med Sci .....	1,803	1,330	1,191	1,117	1,679	753	476	483
159 Med U of South Carolina .....	1,793	2,868	2,115	2,264	2,089	1,849	1,548	1,379
160 Yeshiva University .....	1,780	1,650	1,601	0	0	0	0	0
Total, 1st 160 insts. ....	1,270,397	1,191,902	1,099,088	1,026,726	901,974	783,787	714,558	632,987
161 Inst Paper Sci and Tech .....	1,726	624	435	172	591	830	546	564
162 U of Missouri Rolla .....	1,717	2,147	1,564	2,186	2,385	3,280	1,153	1,338
163 Catholic U of America .....	1,690	1,544	1,064	615	477	313	106	187
164 Brigham Young University ...	1,678	2,241	1,817	1,845	1,488	1,438	2,150	2,075 i
165 Idaho State University .....	1,678	1,083	603	475	411	315	269	117
166 Stevens Institute Tech .....	1,659	6,237	1,635	960	600	1,966	1,852	1,786 i
167 George Mason University .....	1,654	1,489	1,552	742	348	215 i	164	113 i
168 U of South Alabama .....	1,562	1,703	1,788	1,553	1,277	1,118	914	896
169 Rochester Inst of Tech .....	1,504	1,574 i	1,271 i	969 i	666 i	737	583 i	443 i
170 Florida A&M University .....	1,503	1,291	142	145	393	366	0	253 i
Total, 1st 170 insts. ....	1,286,768	1,211,835	1,110,959	1,036,388	910,610	794,365	722,295	640,759
171 New York Medical College ...	1,480	1,429	1,981	1,706	878	2,287	800	656
172 U of New Hampshire .....	1,467	1,813	1,278	1,464	1,183	1,124	1,057	648
173 Clarkson University .....	1,455	2,315	2,051	1,638	1,282	978	1,113	1,288
174 Northeastern University .....	1,445	1,444	1,976 i	1,711	953	730	561	525
175 Polytechnic University .....	1,420 e	1,972	1,972	2,278	2,821	1,405	1,245	500
176 San Diego St University .....	1,418	1,865	1,980	1,994	2,303	1,815	1,353	1,012
177 U of Rhode Island .....	1,387	1,253 i	1,212	1,071	2,014 e	3,544	1,130	752 i
178 Florida State University .....	1,377	598	1,408	669	832	571	280	217
179 U MD Baltimore County .....	1,349	1,363	1,043 e	596 e	418 e	159 e	226 e	212 e
180 University of Houston .....	1,339	1,595	1,608	1,529	1,375	1,940	1,959	2,851
Total, 1st 180 insts. ....	1,300,905	1,227,482	1,127,468	1,051,044	924,669	808,918	732,019	649,420
181 CUNY City College .....	1,327	1,105	1,032	442	667	607	1,397	935 i
182 Northern Illinois U .....	1,317	1,458	1,629	2,351	1,656	1,152	890	824
183 SUNY Binghamton .....	1,312	1,505	1,761	1,308	1,126	909	836	705
184 U of NC Charlotte .....	1,294	1,049	815	381	658	350	236 i	208 i
185 Tennessee Tech U .....	1,288	1,097	871	945	836	274	371	309 i
186 Cooper Union .....	1,265	961 i	753 i	543 i	335 i	31 i	37 i	42 i
187 U of Detroit Mercy .....	1,252	1,363	1,091	1,244	1,125	754	616 i	573 i
188 Old Dominion University .....	1,250	1,011	979	581	353	64	308	316 i
189 SUNY Albany .....	1,240	1,080	876	727	657	399	271	300
190 Harvey Mudd College .....	1,228	1,095 i	1,107 i	1,120 i	1,132 i	1,000	1,231	992
Total, 1st 190 insts. ....	1,313,678	1,239,206	1,138,382	1,060,686	933,214	814,458	738,212	654,624
191 U CA Riverside .....	1,208	857	1,361	903	1,094	1,692	1,955	2,041
192 North Dakota State U .....	1,191	1,193	1,455	1,289	1,257	1,246	1,995	1,892
193 Col of William & Mary .....	1,117	630	526	465	438 e	641	723	268
194 St Louis University .....	1,054	523	1,058	1,148	913	651	203 i	210 i
195 U of Nevada Reno .....	1,033	916	1,276	1,227	1,019	695	687	425 i
196 Illinois Inst of Tech .....	1,031	1,145	1,660	1,819	2,089	1,465	1,002	954
197 San Francisco State U .....	1,018	622 i	551 i	483 i	412 i	14	87	40
198 Western Michigan U .....	994	947	843	1,102	852 i	603	710	519
199 Oregon Health Sciences U ..	992	1,043	1,099	1,325	706	1,094	243	458
200 University North Dakota .....	982	863	853	1,556	1,264	1,496 e	1,583	1,180 i
Total, 1st 200 insts. ....	1,324,298	1,247,945	1,149,064	1,072,003	943,258	824,055	747,400	662,611
Total, all other sampled insts. ....	49,659	43,407	55,564	55,699	51,601	48,233	42,693	37,079

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-39. R&D expenditures at universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
Total, all institutions .....	19,911,352	3,151,298	2,124,377	1,317,619	869,472	10,827,725	349,344	896,139	375,378
1 Johns Hopkins U .....	745,515	203,064	116,033	43,880	107,416	249,430	844	9,050	15,798
2 University of Michigan .....	425,868	74,735	30,577	23,999	21,855	203,823	11,952	52,042	6,885
3 U WI Madison .....	372,362	49,723	36,719	24,004	8,647	212,123	10,749	28,580	1,817
4 MA Institute of Tech .....	365,553	155,174	101,256	14,666	20,388	35,792	8,043	8,540	21,694
5 University of Washington .....	335,329	18,451	18,591	55,031	6,171	216,655	6,778	9,834	3,818
6 University of Minnesota .....	332,033	28,856	16,735	13,185	17,167	236,421	7,548	12,121	0
7 Texas A&M University .....	322,691	77,413	18,015	74,688	4,866	129,639	1,407	12,430	4,233
8 U CA San Francisco .....	314,599	0	0	0	0	314,599	0	0	0
9 Cornell University .....	310,949	43,369	44,976	5,359	31,930	171,569	3,321	10,425	0
10 U CA San Diego .....	307,051	13,738	43,430	78,807	10,934	153,495	3,545	3,102	0
Total, 1st 10 insts. ....	3,831,950	664,523	426,332	333,619	229,374	1,923,546	54,187	146,124	54,245
11 Stanford University .....	306,676	90,770	46,532	5,761	13,391	142,057	3,559	4,606	0
12 U CA Berkeley .....	284,346	62,019	63,693	4,888	7,320	114,359	6,870	20,842	4,355
13 Pennsylvania State U .....	282,659	118,454	20,733	18,477	4,495	92,148	5,745	10,551	12,056
14 U CA Los Angeles .....	277,974	27,799	24,577	14,196	7,430	178,798	7,435	17,739	0
15 Harvard University .....	257,207	5,274	28,041	9,054	3,963	159,744	3,251	41,102	6,778
16 University of IL Urbana .....	252,811	53,304	40,517	27,791	19,008	54,529	6,088	12,909	38,665
17 U TX Austin .....	249,158	99,240	64,258	27,457	15,448	20,830	3,364	15,473	3,088
18 University of Arizona .....	235,528	20,093	65,920	20,633	6,077	110,620	2,122	8,685	1,378
19 U of Pennsylvania .....	233,829	14,934	19,047	644	8,136	167,039	2,161	17,192	4,676
20 U MD College Park .....	229,344	48,698	65,431	12,858	14,698	63,254	2,367	22,038	0
Total, 1st 20 insts. ....	6,441,482	1,205,108	865,081	475,378	329,340	3,026,924	97,149	317,261	125,241
21 Yale University .....	226,850	7,200	19,473	2,314	6,138	180,991	6,298	4,436	0
22 U CA Davis .....	223,758	15,487	8,859	1,490	654	193,843	913	2,512	0
23 Ohio State University .....	221,460	44,967	18,645	6,756	9,872	114,193	1,118	19,935	5,974
24 Columbia U Main Division .....	204,710	14,743	18,125	28,472	3,887	132,312	2,173	4,998	0
25 Duke University .....	202,434	8,515	12,286	4,024	3,265	158,918	5,202	10,168	56
26 U of Southern California .....	200,822	27,576	7,843	14,596	37,087	103,156	2,330	7,237	997
27 University of Colorado .....	193,217	22,942	28,968	32,086	6,323	91,032	8,006	3,791	69
28 Washington University .....	179,329	3,510	7,765	3,439	5,546	157,620	736	713	0
29 U of NC Chapel Hill .....	179,157	0	9,246	9,893	8,649	133,978	2,441	14,950	0
30 University of Pittsburgh .....	178,575	8,740	12,159	314	2,173	145,177	2,210	6,836	966
Total, 1st 30 insts. ....	8,451,794	1,358,788	1,008,450	578,762	412,934	4,438,144	128,576	392,837	133,303
31 Georgia Institute of Tech .....	175,873	115,523	15,761	7,640	23,999	3,690	1,492	7,632	136
32 University of Georgia .....	172,274	4,146	7,831	7,187	7,239	120,779	4,310	20,782	0
33 Baylor Col of Medicine .....	172,252	0	0	0	0	172,252	0	0	0
34 University of Rochester .....	161,810	46,716	14,313	374	2,743	89,730	6,682	946	306
35 Rutgers the State U NJ .....	161,025	18,932	19,062	8,434	11,468	73,650	6,927	18,600	3,952
36 Louisiana State U System .....	158,823	24,145	10,377	19,076	1,738	95,758	800	5,803	1,126
37 NC State U Raleigh .....	155,624	48,244	8,785	8,945	4,902	81,135	364	3,249	0
38 Northwestern University .....	154,227	21,017	11,949	790	4,928	75,472	1,867	2,134	36,070
39 Michigan State University .....	150,861	18,114	27,577	893	2,642	84,705	3,598	11,771	1,561
40 Purdue University .....	149,032	40,454	16,730	2,221	5,958	74,151	2,301	7,002	215
Total, 1st 40 insts. ....	10,063,595	1,696,079	1,140,835	634,322	478,551	5,309,466	156,917	470,756	176,669
41 U of Iowa .....	148,811	15,181	16,855	501	1,163	107,808	1,066	4,682	1,555
42 Iowa St U of Sci & Tech .....	148,459	35,955	5,944	819	10,300	79,053	770	11,636	3,982
43 U of Tennessee System .....	143,662	30,248	13,109	13,801	9,411	71,803	234	4,277	779
44 University of Florida .....	142,966	28,912	12,243	1,706	5,379	85,540	2,564	2,950	3,672
45 VA Polytech Inst & St U .....	135,771	45,671	9,249	20,434	2,594	51,095	1,662	5,066	0
46 U of Alabama Birmingham .....	133,790	5,271	703	586	127	125,857	936	310	0
47 University of Connecticut .....	133,054	24,452	3,703	7,387	3,145	76,948	7,241	8,549	1,629
48 New York University .....	129,774	0	3,847	332	11,108	99,503	7,017	6,936	1,031
49 SUNY Buffalo .....	128,203	23,732	7,067	686	7,364	80,868	5,051	3,333	102
50 Indiana University .....	127,877	940	29,225	2,167	3,169	75,107	4,704	4,785	7,780
Total, 1st 50 insts. ....	11,435,962	1,906,441	1,242,780	682,741	532,311	6,163,048	188,162	523,280	197,199

See explanatory information and SOURCE at end of table.

**Table B-39. R&D expenditures at universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
51 U TX MD Anderson Cnrc Ctr	127,475	0	2,824	0	2,653	121,998	0	0	0
52 Case Western Reserve U	124,691	24,957	5,345	292	409	89,427	403	3,858	0
53 University of Miami	120,875	1,680	1,290	22,848	549	83,633	999	9,869	7
54 Emory University	120,125	0	6,032	2	296	106,481	989	6,325	0
55 Carnegie Mellon U	118,261	26,178	7,323	2,424	56,649	13,916	4,918	5,531	1,322
56 University of Virginia	118,019	19,700	13,536	6,611	4,326	66,704	2,823	4,222	97
57 California Inst of Tech	115,439	20,384	51,180	12,870	7,001	21,982	0	891	1,131
58 Colorado State University	115,385	16,137	8,372	11,427	1,520	57,825	2,141	3,994	13,969
59 U TX SW Med Ctr Dallas	114,258	0	0	0	0	114,258	0	0	0
60 Oregon State University	114,004	9,801	4,362	25,240	2,360	68,080	147	3,202	812
Total, 1st 60 insts.	12,624,494	2,025,278	1,343,044	764,455	608,074	6,907,352	200,582	561,172	214,537
61 University of Chicago	111,877	0	28,792	3,106	3,537	72,595	1,192	2,655	0
62 U MD Baltimore Prof Sch	111,772	0	0	0	0	111,772	0	0	0
63 SUNY Stony Brook	107,817	2,801	22,141	15,463	5,395	56,711	2,900	2,257	149
64 U of Missouri Columbia	106,193	12,362	7,621	1,570	674	74,708	1,128	7,658	472
65 University of IL Chicago	105,552	8,056	8,207	1,061	2,415	79,538	2,082	2,727	1,466
66 University of Utah	105,263	16,679	9,163	3,672	8,808	65,207	1,346	388	0
67 University of Kentucky	102,911	16,729	2,759	144	1,266	72,789	607	1,978	6,639
68 U CA Irvine	100,631	8,655	15,236	25	4,373	66,886	79	4,821	556
69 Princeton University	98,603	24,916	24,518	8,087	8,749	17,767	5,568	8,998	0
70 Vanderbilt University	96,181	8,591	7,777	114	548	74,218	2,021	2,900	12
Total, 1st 70 insts.	13,671,294	2,124,067	1,469,258	797,697	643,839	7,599,543	217,505	595,554	223,831
71 U of Nebraska Lincoln	94,959	11,263	7,389	4,186	1,335	67,964	578	2,244	0
72 University of Cincinnati	92,512	19,746	4,535	278	599	64,906	403	172	1,873
73 Washington State U	92,434	8,762	4,553	482	577	58,054	292	11,384	8,330
74 University of Oklahoma	92,019	14,512	7,585	11,921	4,176	40,577	2,803	10,445	0
75 Boston University	91,158	7,049	10,463	1,117	3,173	63,741	435	1,824	3,356
76 Yeshiva University	89,636	0	0	0	0	89,636	0	0	0
77 New Mexico State U	85,974	45,450	2,903	10,719	3,447	20,763	52	1,024	1,616
78 Wayne State University	85,627	7,014	8,517	0	767	62,874	1,872	2,660	1,923
79 University of Kansas	85,134	6,269	5,997	8,026	418	49,786	1,779	1,170	11,689
80 Woods Hole Ocngrphc Inst	81,519	16,999	0	64,520	0	0	0	0	0
Total, 1st 80 insts.	14,562,266	2,261,131	1,521,200	898,946	658,331	8,117,844	225,719	626,477	252,618
81 Clemson University	78,569	24,798	4,955	675	3,856	37,009	198	6,636	442
82 Utah State University	77,263	24,093	5,497	13,544	454	23,112	1,706	1,520	7,337
83 Virginia Commonwealth U	77,097	386	2,505	0	277	71,270	996	1,663	0
84 University of New Mexico	76,736	30,509	4,390	1,987	1,901	22,264	2,083	4,903	8,699
85 U Med & Dent NJ	76,410	0	0	0	0	76,410	0	0	0
86 Tulane University	75,634	7,054	2,259	290	495	57,770	1,306	6,292	168
87 CUNY Mt Sinai Sch of Med	75,337	0	0	0	0	75,337	0	0	0
88 U of South Florida	75,322	10,726	1,560	6,772	140	50,539	4,342	1,243	0
89 U TX Hlth Sci Ctr San Ant	75,239	0	0	0	0	75,239	0	0	0
90 Rockefeller University	74,396	0	6,037	0	1,082	67,277	0	0	0
Total, 1st 90 insts.	15,324,269	2,358,697	1,548,403	922,214	666,536	8,674,071	236,350	648,734	269,264
91 University Hawaii Manoa	73,961	1,840	22,267	10,262	1,020	29,276	753	3,612	4,931
92 Georgetown University	73,785	0	5,418	676	1,264	63,357	84	2,780	206
93 Oklahoma State University	72,920	16,433	7,702	1,360	489	38,176	242	5,084	3,434
94 Mississippi State U	70,300	15,993	2,079	2,833	270	40,198	0	3,357	5,570
95 U CA Santa Barbara	68,775	23,798	16,588	10,085	5,531	3,142	3,155	6,366	110
96 Auburn University	68,151	19,690	4,003	231	448	40,054	224	982	2,519
97 U TX Med Br Galveston	67,998	0	0	0	0	67,998	0	0	0
98 U of Alaska Fairbanks	66,796	2,735	14,134	32,623	72	14,797	0	2,435	0
99 Arizona State University	66,142	21,893	16,914	3,836	2,015	7,438	3,432	8,163	2,451
100 U MA Amherst	64,111	9,629	15,077	6,383	12,259	17,123	2,637	723	280
Total, 1st 100 insts.	16,017,208	2,470,708	1,652,585	990,503	689,904	8,995,630	246,877	682,236	288,765

See explanatory information and SOURCE at end of table.

**Table B-39. R&D expenditures at universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
101 Florida State University .....	62,929	906	38,281	10,178	1,519	6,720	2,233	3,092	0
102 KS St U Agri & App Sci .....	62,562	9,091	4,214	243	950	44,871	488	1,611	1,094
103 Dartmouth College .....	59,920	6,139	2,976	1,447	1,115	47,169	326	721	27
104 U CA Riverside .....	59,065	552	5,164	1,673	1,017	49,153	753	753	0
105 U TX Hlth Sci Ctr Houston ...	58,786	0	0	0	0	58,178	0	608	0
106 U Arkansas Fayetteville .....	58,325	8,733	5,302	1,188	1,174	37,500	583	2,806	1,039
107 Wake Forest University .....	57,646	0	864	0	88	56,478	0	0	216
108 Brown University .....	57,152	9,073	8,330	4,858	9,632	20,632	2,111	2,459	57
109 U of South Carolina .....	57,062	9,314	6,346	12,276	4,062	16,307	1,518	5,942	1,297
110 Tufts University .....	56,976	2,219	1,797	4,035	143	46,187	906	1,689	0
Total, 1st 110 insts. ....	16,607,631	2,516,735	1,725,859	1,026,401	709,604	9,378,825	255,795	701,917	292,495
111 Oregon Health Sciences U ..	56,860	0 i	0 i	0 i	0 i	54,978 i	1,882 i	0 i	0 i
112 University of Houston .....	55,038	23,058	18,860	1,001	1,997	5,728	2,865	1,204	325
113 U MA Worcester .....	54,277	0	0	0	0	54,277	0	0	0
114 West Virginia University .....	54,271	11,184	2,328	6,571	6,364	24,915	34	2,414	461
115 Temple University .....	53,686	433	1,103	15	474	36,321	4,906	10,373	61
116 University of Delaware .....	52,627	16,231	8,787	7,034	2,997	11,402	572	5,604	0
117 Thomas Jefferson U .....	51,106	0	0	0	0	51,106	0	0	0
118 U of VT & State Agri Col .....	49,839	1,318	1,283	59	162	45,726	703	38	550
119 Medical Col of Wisconsin .....	48,689	0	0	0	0	48,689	0	0	0
120 U of Rhode Island .....	45,942	5,331 i	1,133 i	22,227 i	275 i	9,978 i	3,404 i	2,733 i	861 i
Total, 1st 120 insts. ....	17,129,966	2,574,290	1,759,353	1,063,308	721,873	9,721,945	270,161	724,283	294,753
121 University of Dayton .....	45,052	40,390	1,626	126	778	491	1,304	326	11
122 University of Idaho .....	44,655	6,720	1,586	2,794	172	32,440	78	865	0
123 Rensselaer Polytech Inst .....	44,132	31,787	7,007	951	2,879	657	10	341	500
124 Med U of South Carolina .....	42,543	0	0	0	0	42,543	0	0	0
125 George Washington U .....	41,177	6,883	1,148	33	6,858	15,828	1,297	9,119	11
126 U of New Hampshire .....	39,555	4,198	1,599	20,840	799	8,724	211	2,651	533
127 U of Nevada Reno .....	38,564	5,205	1,910	5,181	85	15,775	280	2,003	8,125
128 Texas Tech University .....	38,119	9,927	4,293	1,250	1,130	18,227	78	2,674	540
129 U CA Santa Cruz .....	37,886	0	17,800	7,805	1,636	6,993	845	2,807	0
130 SUNY Albany .....	37,860	0	2,540	7,274	669	19,869	3,765	3,743	0
Total, 1st 130 insts. ....	17,539,509	2,679,400	1,798,862	1,109,562	736,879	9,883,492	278,029	748,812	304,473
131 Brandeis University .....	36,213	0	3,387	0	1,080	16,766	1,385	13,595	0
132 North Dakota State U .....	34,971	3,264	4,241	104	575	24,543	266	1,767	211
133 U of Alabama Huntsville .....	34,153	15,097	10,433	2,819	4,565	472	0	75	692
134 Rush University .....	34,039	0	0	0	0	29,897	4,142	0	0
135 U of Central Florida .....	33,922	5,908	8,073	8,225	989	596	369	591	9,171
136 Montana State University .....	32,911	4,383	3,823	395	374	22,132	32	1,248	524
137 University of Wyoming .....	32,556	2,208	2,057	7,855	348	16,679	291	266	2,852
138 San Diego St University .....	32,493	3,586	1,761	629	1,794	15,836	2,902	1,249	4,736
139 Syracuse University .....	32,443	9,938	5,255	967	6,720	4,631	1,330	2,254	1,348
140 U of NE Med Ctr Omaha .....	31,669	0	0	0	0	31,669	0	0	0
Total, 1st 140 insts. ....	17,874,879	2,723,784	1,837,892	1,130,556	753,324	10,046,713	288,746	769,857	324,007
141 Lehigh University .....	30,869	23,087	4,981	948	635	676	294	248	0
142 Unif Svcs U of Hlth Sci .....	30,846	0	0	0	0	30,846	0	0	0
143 University of Oregon .....	30,738	1,945	12,097	1,546	1,099	9,865	2,007	2,179	0
144 Rice University .....	30,403	5,293	8,853	2,794	9,386	3,727	314	36	0
145 Loyola U of Chicago .....	29,232	0	675	0	959	25,291	156	1,642	509
146 SUNY Hlth Sci Ctr Brklyn .....	27,645	0	0	0	0	27,645	0	0	0
147 Strn IL U Carbondale .....	26,376	3,491	1,723	563	2,035	12,598	183	1,353	4,430
148 The Medical Col of PA .....	24,996	0	0	0	0	24,996	0	0	0
149 Medical Col of Georgia .....	24,935	0	0	0	0	24,935	0	0	0
150 U of Maine Orono .....	24,879	3,004	536	4,712	38	14,214	390	1,985	0
Total, 1st 150 insts. ....	18,155,798	2,760,604	1,866,757	1,141,119	767,476	10,221,506	292,090	777,300	328,946

See explanatory information and SOURCE at end of table.

**Table B-39. R&D expenditures at universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
151 US Naval Postgrad School ..	24,296	7,232	2,419	3,916	6,322	450	0	2,430	1,527
152 NM Inst Mining & Tech .....	24,040	16,757	2,143	4,606	303	210	1	20	0
153 NJ Inst of Technology .....	23,781	7,429	1,485	8,007	660	0	0	84	6,116
154 University of Notre Dame .....	23,745	6,591	13,364	19	359	2,929	270	75	138
155 University of Mississippi .....	23,734	3,206	4,564	0	107	15,000	261	596	0
156 U of PR Mayaguez .....	23,156	2,923	1,973	2,765	293	13,835	0	354	1,013
157 The University of Alabama .....	23,149	7,422	5,291	1,527	857	3,450	407	3,866	329
158 Florida A&M University .....	22,777	3,314 i	2,235 i	0 i	91 i	17,120 i	5 i	12 i	0 i
159 SUNY Col Env Sci & Frstry ..	21,856	7,074	1,293	2,187	179	10,918	0	205	0
160 Col of William & Mary .....	21,793	0	3,846	14,944	887	715	257	1,144	0
Total, 1st 160 insts. ....	18,388,125	2,822,552	1,905,370	1,179,090	777,534	10,286,133	293,291	786,086	338,069
161 Desert Research Institute ....	21,187	0	0	14,680	0	3,500	0	3,007	0
162 San Jose State University .....	21,005	5,770	1,881	9,427	328	598	2,938	63	0
163 St Louis University .....	20,826	0	8	854	68	19,886	0	0	10
164 Wright State University .....	20,589	2,670	2,607	297	2,028	11,994	674	165	154
165 CUNY City College .....	20,401	6,532	7,260	491	720	4,294	701	156	247
166 Drexel University .....	20,314	13,027	1,928	844	932	1,473	0	2,110	0
167 University of Louisville .....	19,496	1,116	2,044	560	205	14,320	83	1,168	0
168 U of Nevada Las Vegas .....	19,373	2,275	804	11,234	1,979	1,405	5	1,333	338
169 University North Dakota .....	19,204	10,768	165	1,531	0	4,264	19	1,281	1,176
170 U MD Center for EES .....	19,055	0	0	19,055	0	0	0	0	0
Total, 1st 170 insts. ....	18,589,575	2,864,710	1,922,067	1,238,063	783,794	10,347,867	297,711	795,369	339,994
171 Michigan Tech University .....	18,696	11,940 i	1,943 i	637 i	181 i	2,973 i	0 i	897 i	125 i
172 Northeastern University .....	18,517	6,465	3,515	321	2,236	4,734	995	251	0
173 New York Medical College .....	18,491	0 i	0 i	0 i	0 i	18,491 i	0 i	0 i	0 i
174 Howard University .....	18,427	3,111	2,184	0	1,081	10,371	613	854	213
175 Oregon Grad Inst Sci Tech ..	18,288	4,055	6,128	3,590	4,515	0	0	0	0
176 U WI Milwaukee .....	18,245	3,152	3,236	2,720	480	2,272	486	4,973	926
177 U of Missouri Rolla .....	18,025	13,706	2,472	723	298	67	2	29	728
178 Hahnemann University .....	17,756	0	0	0	0	17,756	0	0	0
179 U of PR Med Sci Campus .....	17,574	0	0	0	0	17,574	0	0	0
180 George Mason University .....	15,830	8,239	1,182	1	2,670	889	550	2,299	0
Total, 1st 180 insts. ....	18,769,424	2,915,378	1,942,727	1,246,055	795,255	10,422,994	300,357	804,672	341,986
181 Eastern Virginia Med Sch ....	15,818	0	0	0	0	15,818	0	0	0
182 U Arkansas Med Sci .....	15,686	0	0	0	0	15,686	0	0	0
183 Ohio University .....	15,452	8,767	1,615	134	78	4,444	102	171	141
184 University of Akron .....	15,385	4,416	8,770	75	618	1,025	55	426	0
185 University of Montana .....	15,169	0	509	342	1,871	9,842	25	1,329	1,251
186 U TX Arlington .....	14,834	9,262	2,650	537	1,129	695	68	238	255
187 Western Illinois U .....	14,448	2,814 i	2,347 i	2,035 i	813 i	4,516 i	626 i	952 i	345 i
188 U MA Lowell .....	14,292	5,594	4,564	86	626	1,458	69	5	1,890
189 South Dakota State U .....	14,050	1,051	395	897	2	11,113	0	592	0
190 Stevens Institute Tech .....	14,004	13,367	633	0	4	0	0	0	0
Total, 1st 190 insts. ....	18,918,562	2,960,649	1,964,210	1,250,161	800,396	10,487,591	301,302	808,385	345,868
191 Mercer University .....	13,771	11,784	230	0	0	1,757	0	0	0
192 SUNY Binghamton .....	13,760	2,141	1,980	998	1,168	2,015	3,425	2,033	0
193 Colorado School of Mines .....	13,644	10,588	1,611	520	925	0	0	0	0
194 Brigham Young University .....	13,587	6,214	2,340	114	462	2,706	137	1,469	145
195 SUNY Hlth Sci Ctr Syrcse ....	13,514	0	0	0	0	13,514	0	0	0
196 U TX Dallas .....	13,371	840	7,270	1,056	501	2,222	683	799	0
197 U of South Alabama .....	12,650	148	217	365	90	10,848	256	632	94
198 U TX El Paso .....	12,480	3,916	1,272	1,160	1,478	2,586	625	1,443	0
199 Med Col of Ohio Toledo .....	12,285	0	0	286	118	11,881	0	0	0
200 Georgia State University .....	12,133	0	2,778	275	676	2,976	2,969	1,872	587
Total, 1st 200 insts. ....	19,049,757	2,996,280	1,981,908	1,254,935	805,814	10,538,096	309,397	816,633	346,694
Total, all other sampled insts. ....	861,595	155,018	142,469	62,684	63,658	289,629	39,947	79,506	28,684

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-40. Federally financed R&D expenditures at universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
Total, all institutions .....	11,957,140	1,858,216	1,513,451	870,361	624,639	6,382,815	234,186	338,031	135,441
1 Johns Hopkins U .....	673,601	198,765	112,799	42,196	106,952	204,479	783	4,776	2,851
2 University of Washington .....	268,819	10,043	14,344	50,789	5,762	173,393	6,309	5,641	2,538
3 MA Institute of Tech .....	267,414	107,423	82,262	11,829	16,191	31,601	7,313	3,435	7,360
4 Stanford University .....	254,379	78,061	42,174	4,745	12,266	113,245	3,068	820	0
5 University of Michigan .....	249,951	44,668	13,510	16,624	15,126	126,885	7,807	22,618	2,713
6 U CA San Diego .....	243,149	10,920	37,875	57,152	7,685	126,016	2,566	935	0
7 U WI Madison .....	213,955	31,278	27,544	16,554	6,268	108,025	8,718	15,393	175
8 U CA San Francisco .....	210,148	0	0	0	0	210,148	0	0	0
9 Cornell University .....	195,229	28,923	39,800	3,648	24,053	94,826	1,483	2,496	0
10 U CA Los Angeles .....	189,065	20,057	22,082	9,457	6,478	121,961	5,597	3,433	0
Total, 1st 10 insts. ....	2,765,710	530,138	392,390	212,994	200,781	1,310,579	43,644	59,547	15,637
11 Columbia U Main Division ....	182,696	12,251	16,822	28,197	3,071	116,106	2,173	4,076	0
12 Harvard University .....	181,969	4,054	24,155	6,631	3,802	123,020	2,613	11,182	6,512
13 University of Minnesota .....	174,716	15,735	13,351	4,508	13,870	118,145	6,037	3,070	0
14 U of Pennsylvania .....	173,593	10,471	15,687	93	6,517	126,296	2,035	8,557	3,937
15 Yale University .....	168,900	5,805	16,600	1,762	5,517	136,069	2,190	957	0
16 Pennsylvania State U .....	160,152	79,610	12,749	10,287	2,754	45,410	2,631	3,982	2,729
17 U CA Berkeley .....	156,394	31,539	51,601	2,978	5,530	53,477	4,465	5,798	1,006
18 U of Southern California .....	149,965	22,262	7,196	10,738	34,287	70,287	2,021	3,145	29
19 University of Pittsburgh .....	141,776	5,349	10,490	293	1,801	117,065	2,100	3,734	944
20 University of IL Urbana .....	141,149	30,388	33,235	8,295	9,933	26,217	4,015	3,938	25,128
Total, 1st 20 insts. ....	4,397,020	747,602	594,276	286,776	287,863	2,242,671	73,924	107,986	55,922
21 U TX Austin .....	139,126	55,324	44,189	11,820	7,645	13,312	2,651	3,501	684
22 University of Colorado .....	138,584	13,650	19,559	24,097	3,721	69,804	5,361	2,392	0
23 Duke University .....	136,377	6,209	10,335	2,837	2,892	101,794	4,964	7,346	0
24 U of NC Chapel Hill .....	130,920	0	7,356	5,649	5,688	99,994	2,305	9,928	0
25 University of Rochester .....	130,898	42,751	12,759	305	2,587	68,701	3,097	698	0
26 Washington University .....	129,482	2,593	6,137	1,971	4,518	113,093	666	504	0
27 Texas A&M University .....	122,533	19,249	9,358	57,072	2,326	31,418	736	2,160	214
28 University of Arizona .....	113,423	9,223	31,298	7,266	3,947	57,305	834	2,555	995
29 Ohio State University .....	109,069	15,251	13,179	4,378	3,588	57,418	610	12,721	1,924
30 U CA Davis .....	105,255	7,728	7,468	1,287	501	86,415	827	1,029	0
Total, 1st 30 insts. ....	5,652,687	919,580	755,914	403,458	325,276	2,941,925	95,975	150,820	59,739
31 California Inst of Tech .....	103,888	18,084	46,825	12,123	6,504	18,782	0	840	730
32 Georgia Institute of Tech .....	98,398	64,634	8,818	4,274	13,427	2,064	835	4,270	76
33 University of Chicago .....	95,930	0	26,864	2,959	3,309	61,439	861	498	0
34 U of Alabama Birmingham .....	94,762	892	489	177	96	92,246	708	154	0
35 New York University .....	93,633	0	3,165	174	10,391	72,187	6,640	845	231
36 U of Iowa .....	93,483	7,073	12,534	186	864	70,492	652	1,130	552
37 Case Western Reserve U ....	91,867	16,223	3,870	274	387	69,872	369	872	0
38 University of Miami .....	91,472	958	1,230	20,158	474	58,196	857	9,597	2
39 Baylor Col of Medicine .....	87,623	0	0	0	0	87,623	0	0	0
40 U MD College Park .....	85,041	21,463	32,674	7,076	5,399	8,551	313	9,565	0
Total, 1st 40 insts. ....	6,588,784	1,048,907	892,383	450,859	366,127	3,483,377	107,210	178,591	61,330
41 Vanderbilt University .....	83,683	6,813	6,604	97	494	66,346	1,643	1,674	12
42 University of Utah .....	83,237	10,830	7,956	2,693	7,716	52,749	1,020	273	0
43 SUNY Buffalo .....	80,723	9,223	4,326	232	6,000	59,368	1,181	374	19
44 Emory University .....	80,424	0	4,536	0	260	73,674	729	1,225	0
45 Carnegie Mellon U .....	78,666	14,920	5,603	237	44,493	6,514	3,429	3,325	145
46 Northwestern University .....	77,687	13,836	8,444	621	3,996	41,409	1,538	595	7,248
47 Indiana University .....	77,377	193	20,709	1,287	1,977	46,584	3,500	1,274	1,853
48 U of Tennessee System .....	76,578	15,796	8,073	10,232	6,870	33,375	170	2,062	0
49 University of Virginia .....	75,580	12,607	10,251	5,474	3,174	41,659	2,151	178	86
50 Woods Hole Ocngrphc Inst ..	73,546	15,848	0	57,698	0	0	0	0	0
Total, 1st 50 insts. ....	7,376,285	1,148,973	968,885	529,430	441,107	3,905,055	122,571	189,571	70,693

See explanatory information and SOURCE at end of table.



**Table B-40. Federally financed R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
51 Purdue University .....	72,954	23,700	12,326	1,480	3,921	27,707	1,499	2,120	201
52 Yeshiva University .....	71,771	0	0	0	0	71,771	0	0	0
53 University of Florida .....	71,704	12,802	6,026	714	3,307	45,607	1,206	769	1,273
54 Boston University .....	71,593	5,565	8,540	692	3,149	50,624	316	571	2,136
55 Michigan State University .....	70,294	8,440	12,849	416	1,231	39,470	1,676	5,485	727
56 Colorado State University .....	68,733	8,800	6,593	10,608	684	39,663	1,937	448	0
57 SUNY Stony Brook .....	68,023	1,369	15,147	8,830	3,289	35,952	2,438	998	0
58 U TX SW Med Ctr Dallas .....	67,943	0	0	0	0	67,943	0	0	0
59 New Mexico State U .....	64,821	38,316	2,528	9,360	2,512	9,716	40	872	1,477
60 U CA Irvine .....	64,546	3,662	13,411	24	3,535	40,665	1	2,767	481
Total, 1st 60 insts. ....	8,068,667	1,251,627	1,046,305	561,554	462,735	4,334,173	131,684	203,601	76,988
61 NC State U Raleigh .....	62,470	21,715	5,495	4,537	2,144	27,175	235	1,169	0
62 VA Polytech Inst & St U .....	61,708	23,698	4,402	16,147	1,456	13,466	738	1,801	0
63 Oregon State University .....	61,118	3,634	3,059	20,603	1,433	30,390	142	1,215	642
64 University of Cincinnati .....	57,394	11,822	2,874	190	388	40,519	141	75	1,385
65 Princeton University .....	56,746	12,964	16,947	4,786	6,196	10,700	3,280	1,873	0
66 Rutgers the State U NJ .....	55,169	6,365	9,496	2,323	5,714	21,031	3,003	7,192	45
67 U CA Santa Barbara .....	54,057	19,349	14,723	7,145	3,973	2,243	2,479	4,145	0
68 U MD Baltimore Prof Sch .....	53,556	0	0	0	0	53,556	0	0	0
69 Louisiana State U System .....	52,598	6,548	6,028	7,085	337	30,824	609	1,146	21
70 University of Georgia .....	52,085	762	2,947	1,854	1,712	41,856	1,658	1,296	0
Total, 1st 70 insts. ....	8,635,568	1,358,484	1,112,276	626,224	486,088	4,605,933	143,969	223,513	79,081
71 Iowa St U of Sci & Tech .....	50,695	15,469	3,367	506	2,112	23,387	277	5,302	275
72 University of IL Chicago .....	50,415	2,596	4,949	156	1,827	38,859	1,602	423	3
73 CUNY Mt Sinai Sch of Med .....	49,800	0	0	0	0	49,800	0	0	0
74 University of Connecticut .....	49,051	3,348	988	3,803	818	36,023	3,038	951	82
75 Virginia Commonwealth U .....	48,777	127	1,555	0	129	46,036	560	370	0
76 U TX Hlth Sci Ctr San Ant .....	48,467	0	0	0	0	48,467	0	0	0
77 Georgetown University .....	48,463	0	4,134	561	952	41,131	70	1,444	171
78 University of Kentucky .....	46,774	6,607	2,413	96	993	30,362	606	1,465	4,232
79 Tufts University .....	46,625	1,703	1,615	3,466	143	38,439	845	414	0
80 Utah State University .....	45,426	20,185	4,273	8,242	203	9,233	1,349	410	1,531
Total, 1st 80 insts. ....	9,120,061	1,408,519	1,135,570	643,054	493,265	4,967,670	152,316	234,292	85,375
81 Dartmouth College .....	44,092	4,700	2,334	572	886	35,063	277	253	7
82 Washington State U .....	43,678	4,391	3,203	323	414	23,635	159	3,427	8,126
83 University of New Mexico .....	42,866	17,595	2,707	1,258	713	13,427	1,747	1,075	4,344
84 Wake Forest University .....	41,861	0	576	0	86	41,163	0	0	36
85 U of Alaska Fairbanks .....	41,616	835i	10,309i	23,461i	24i	6,394i	0i	593i	0i
86 University Hawaii Manoa .....	41,362	967	16,448	7,330	999	12,406	477	556	2,179
87 U TX MD Anderson Cntr Ctr .....	41,158	0	2,080	0	1,013	38,065	0	0	0
88 Wayne State University .....	40,367	2,110	3,523	0	354	32,745	1,420	176	39
89 Oregon Health Sciences U .....	38,913	0i	0i	0i	0i	37,362i	1,551i	0i	0i
90 Brown University .....	38,851	6,532	5,026	3,976	6,613	14,225	1,430	1,049	0
Total, 1st 90 insts. ....	9,534,825	1,445,649	1,181,776	679,974	504,367	5,222,155	159,377	241,421	100,106
91 Florida State University .....	38,690	553	25,570	6,731	937	3,439	1,244	216	0
92 U TX Hlth Sci Ctr Houston .....	38,664	0	0	0	0	38,137	0	527	0
93 University of Dayton .....	38,333	34,658	1,018	114	762	307	1,257	217	0
94 Thomas Jefferson U .....	38,293	0	0	0	0	38,293	0	0	0
95 University of Kansas .....	37,738	3,280	2,936	969	289	23,096	1,048	41	6,079
96 Tulane University .....	36,940	2,715	785	56	162	29,267	212	3,734	9
97 Rockefeller University .....	36,854	0	3,613	0	93	33,148	0	0	0
98 U Med & Dent NJ .....	35,524	0	0	0	0	35,524	0	0	0
99 University of Houston .....	34,350	11,629	13,424	327	1,346	4,477	2,142	736	269
100 University of Oklahoma .....	33,298	4,556	3,101	4,348	2,373	13,604	833	4,483	0
Total, 1st 100 insts. ....	9,903,509	1,503,040	1,232,223	692,519	510,329	5,441,447	166,113	251,375	106,463

See explanatory information and SOURCE at end of table.

**Table B-40. Federally financed R&D expenditures at universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
101 U of Rhode Island .....	32,609	3,251i	812i	19,326i	200i	3,481i	3,034i	2,051i	454i
102 U MA Worcester .....	32,485	0	0	0	0	32,485	0	0	0
103 U MA Amherst .....	32,065	4,760	8,467	2,092	7,404	7,152	2,131	57	2
104 U of VT & State Agri Col .....	31,530	622	863	19	106	29,456	370	0	94
105 Medical Col of Wisconsin .....	31,261	0	0	0	0	31,261	0	0	0
106 West Virginia University .....	31,092	7,146	1,766	4,956	4,483	11,877	6	437	421
107 U TX Med Br Galveston .....	30,555	0	0	0	0	30,555	0	0	0
108 Arizona State University .....	30,032	6,584	8,779	3,500	1,175	4,635	2,492	2,822	45
109 Mississippi State U .....	29,616	11,256	1,643	2,387	267	11,875	0	1,026	1,162
110 U of Missouri Columbia .....	29,612	2,751	1,576	225	352	21,850	638	2,176	44
Total, 1st 110 insts. ....	10,214,366	1,539,410	1,256,129	725,024	524,316	5,626,074	174,784	259,944	108,685
111 U of South Carolina .....	28,250	4,370	4,559	4,040	2,761	8,390	1,023	2,762	345
112 George Washington U .....	27,698	5,716	1,023	24	6,550	10,210	1,148	3,021	6
113 SUNY Albany .....	27,318	0	1,511	3,966	424	15,717	3,077	2,623	0
114 Temple University .....	26,548	145	494	0	331	17,099	3,867	4,612	0
115 University of Delaware .....	26,170	8,472	5,227	4,939	2,278	2,266	415	2,573	0
116 U of Alabama Huntsville .....	24,983	10,578	8,620	2,144	2,844	191	0	18	588
117 U of Nebraska Lincoln .....	23,930	1,603	4,418	1,361	580	15,156	375	437	0
118 US Naval Postgrad School .....	23,640	7,143	2,082	3,757	6,287	450	0	2,398	1,523
119 U of New Hampshire .....	23,635	1,988	1,240	14,041	518	3,727	177	1,944	0
120 Clemson University .....	23,299	7,354	1,469	200	1,143	10,975	59	1,968	131
Total, 1st 120 insts. ....	10,469,837	1,586,779	1,286,772	759,496	548,032	5,710,255	184,925	282,300	111,278
121 Unif Svcs U of Hlth Sci .....	22,319	0	0	0	0	22,319	0	0	0
122 Rensselaer Polytech Inst .....	22,106	15,924	3,509	476	1,442	329	5	171	250
123 Rice University .....	22,016	3,091	7,000	1,497	7,281	2,902	209	36	0
124 Brandeis University .....	21,825	0	2,731	0	737	12,203	1,163	4,991	0
125 U CA Santa Cruz .....	21,821	0	8,925	5,496	1,411	3,745	622	1,622	0
126 Med U of South Carolina .....	21,471	0	0	0	0	21,471	0	0	0
127 University of Oregon .....	21,465	1,641	8,028	951	861	7,755	1,376	853	0
128 Oklahoma State University .....	20,840	8,713	2,148	82	258	8,723	35	661	220
129 KS St U Agri & App Sci .....	19,582	2,382	3,502	160	330	12,658	138	227	185
130 U CA Riverside .....	19,126	21	4,326	944	568	12,498	668	101	0
Total, 1st 130 insts. ....	10,682,408	1,618,551	1,326,941	769,102	560,920	5,814,858	189,141	290,962	111,933
131 Florida A&M University .....	18,954	2,575i	2,203i	0i	75i	14,084i	5i	12i	0i
132 St Louis University .....	18,583	0	7	854	68	17,644	0	0	10
133 Loyola U of Chicago .....	18,230	0	391	0	824	15,948	13	932	122
134 SUNY Hlth Sci Ctr Brklyn .....	17,916	0	0	0	0	17,916	0	0	0
135 Auburn University .....	17,438	7,310	1,176	143	254	8,123	200	185	47
136 U of Nevada Reno .....	17,097	4,329	1,005	3,300	65	7,840	22	364	172
137 The Medical Col of PA .....	16,990	0	0	0	0	16,990	0	0	0
138 San Diego St University .....	16,862	2,061	1,106	378	1,054	9,225	2,086	237	715
139 Syracuse University .....	16,818	4,367	3,695	545	2,354	4,085	778	671	323
140 U of South Florida .....	16,718	2,987	740	3,525	78	7,594	1,445	349	0
Total, 1st 140 insts. ....	10,858,014	1,642,180	1,337,264	777,847	565,692	5,934,307	193,690	293,712	113,322
141 University North Dakota .....	16,467	9,371	135	1,179	0	3,890	19	843	1,030
142 University of Notre Dame .....	16,415	3,118	11,175	0	322	1,483	226	75	16
143 Lehigh University .....	16,038	12,109	2,769	628	147	121	198	66	0
144 University of Idaho .....	15,877	2,295	813	853	72	11,678	0	166	0
145 Desert Research Institute ....	15,514	0	0	10,539	0	2,161	0	2,814	0
146 Northeastern University .....	15,339	5,014	3,213	250	2,188	3,599	949	126	0
147 University of Mississippi .....	14,917	2,535	3,492	0	98	8,116	257	419	0
148 Howard University .....	14,819	2,324	1,968	0	1,065	8,039	576	634	213
149 CUNY City College .....	14,785	3,713	5,603	370	685	3,619	470	78	247
150 University of Wyoming .....	14,575	606	1,457	3,657	141	8,243	273	163	35
Total, 1st 150 insts. ....	11,012,760	1,683,265	1,367,889	795,323	570,410	5,985,256	196,658	299,096	114,863

See explanatory information and SOURCE at end of table.

**Table B-40. Federally financed R&D expenditures at universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
151 U Arkansas Fayetteville .....	14,398	1,941	2,108	230	127	8,898	0	552	542
152 Montana State University .....	14,096	2,101	2,306	226	320e	8,592	0	260	291e
153 U of PR Med Sci Campus .....	13,821	0	0	0	0	13,821	0	0	0
154 New York Medical College .....	13,468	0i	0i	0i	0i	13,468i	0i	0i	0i
155 Rush University .....	12,787	0	0	0	0	11,203	1,584	0	0
156 U of Central Florida .....	12,527	2,232	2,526	577	763	74	274	0	6,081
157 San Jose State University .....	11,825	3,077	1,052	4,363	122	476	2,698	37	0
158 Drexel University .....	11,335	7,706	1,300	789	508	775	0	257	0
159 U Arkansas Med Sci .....	10,964	0	0	0	0	10,964	0	0	0
160 Texas Tech University .....	10,897	2,341	1,548	228	379	5,254	40	1,107	0
Total, 1st 160 insts. ....	11,138,878	1,702,663	1,378,729	801,736	572,629	6,058,781	201,254	301,309	121,777
161 U of Nevada Las Vegas .....	10,585	902	274	6,973	1,210	720	0	298	208
162 Stevens Institute Tech .....	10,552	9,978	573	0	1	0	0	0	0
163 Clark Atlanta University .....	10,484	1,162	3,271	112	1,682	4,125	0	132	0
164 Col of William & Mary .....	10,335	0	3,166	5,998	679	257	74	161	0
165 Mercer University .....	10,241	9,579	0	0	0	662	0	0	0
166 U of NE Med Ctr Omaha .....	10,131	0	0	0	0	10,131	0	0	0
167 Western Illinois U .....	10,096	1,865i	1,833i	1,281i	591i	3,373i	508i	486i	159i
168 Wright State University .....	10,081	1,277	1,325	0	419	6,549	465	46	0
169 SUNY Hlth Sci Ctr Syrcse .....	9,878	0	0	0	0	9,878	0	0	0
170 Michigan Tech University .....	9,777	5,422i	1,629i	482i	107i	1,836i	0i	301i	0i
Total, 1st 170 insts. ....	11,241,038	1,732,848	1,390,800	816,582	577,318	6,096,312	202,301	302,733	122,144
171 Eastern Virginia Med Sch ....	9,753	0	0	0	0	9,753	0	0	0
172 Hahnemann University .....	9,674	0	0	0	0	9,674	0	0	0
173 Oregon Grad Inst Sci Tech .....	9,591	2,386	3,111	1,655	2,439	0	0	0	0
174 George Mason University .....	9,366	4,749	895	1	2,004	393	216	1,108	0
175 Florida International U .....	9,289	4,878	704	147	266	1,340	513	1,441	0
176 U TX El Paso .....	9,229	2,830	1,028	895	842	2,415	573	646	0
177 Worcester Polytech Inst .....	9,164	2,824	228	0	6,001	110	0	1	0
178 Meharry Medical College .....	9,074	0	0	428	0	8,646	0	0	0
179 U of Maine Orono .....	8,959	850	197	2,490	0	4,587	355	480	0
180 University of Louisville .....	8,924	634	1,804	166	177	6,081	62	0	0
Total, 1st 180 insts. ....	11,334,061	1,751,999	1,398,767	822,364	589,047	6,139,311	204,020	306,409	122,144
181 NC A&T State University .....	8,759	4,889	528	0	80	2,924	89	1	248
182 North Dakota State U .....	8,756	1,414	1,366	50	199	5,064	86	502	75
183 The University of Alabama .....	8,583	3,508	2,472	569	77	1,282	40	394	241
184 Albany Medical College .....	8,564	0	0	0	0	8,564	0	0	0
185 U of PR Mayaguez .....	8,487	1,330	572	1,454	114	4,819	0	181	17
186 Med Col of Ohio Toledo .....	8,286	0	0	4	0	8,282	0	0	0
187 NJ Inst of Technology .....	8,275	3,097	641	1,696	250	0	0	46	2,545
188 U of South Alabama .....	8,270	12	85	133	28	7,436	171	350	55
189 Boston College .....	8,151	0	2,222	430	4,584	694	109	112	0
190 U TX Dallas .....	8,031	183	5,619	334	108	1,536	241	10	0
Total, 1st 190 insts. ....	11,418,223	1,766,432	1,412,272	827,034	594,487	6,179,912	204,756	308,005	125,325
191 Brigham Young University .....	7,967	4,441	1,037	103	236	1,335	79	610	126
192 Medical Col of Georgia .....	7,713	0	0	0	0	7,713	0	0	0
193 University of Denver .....	7,555	543	2,929	21	46	993	2,329	694	0
194 U WI Milwaukee .....	7,455	1,206	1,562	1,016	60	1,105	271	2,133	102
195 Strn IL U Carbondale .....	7,437	280	417	157	117	5,782	110	257	317
196 University of Montana .....	7,303	0	244	137	1,616	4,682	21	603	0
197 Alabama A&M University .....	7,295	207	3,632	0	0	3,255	0	201	0
198 Colorado School of Mines .....	7,050	5,095	1,326	229	400	0	0	0	0
199 Old Dominion University .....	6,914	3,624	1,306	722	688	478	20	76	0
200 CUNY Hunter College .....	6,875	0	2,206	105	71	2,904	646	943	0
Total, 1st 200 insts. ....	11,491,787	1,781,828	1,426,931	829,524	597,721	6,208,159	208,232	313,522	125,870
Total, all other sampled insts. ....	465,353	76,388	86,520	40,837	26,918	174,656	25,954	24,509	9,571

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-41. Non-Federal R&D expenditures at universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
Total, all institutions .....	7,954,212	1,293,082	610,926	447,258	244,833	4,444,910	115,158	558,108	239,937
1 Texas A&M University .....	200,158	58,164	8,657	17,616	2,540	98,221	671	10,270	4,019
2 University of Michigan .....	175,917	30,067	17,067	7,375	6,729	76,938	4,145	29,424	4,172
3 U WI Madison .....	158,407	18,445	9,175	7,450	2,379	104,098	2,031	13,187	1,642
4 University of Minnesota .....	157,317	13,121	3,384	8,677	3,297	118,276	1,511	9,051	0
5 U MD College Park .....	144,303	27,235	32,757	5,782	9,299	54,703	2,054	12,473	0
6 U CA Berkeley .....	127,952	30,480	12,092	1,910	1,790	60,882	2,405	15,044	3,349
7 Pennsylvania State U .....	122,507	38,844	7,984	8,190	1,741	46,738	3,114	6,569	9,327
8 University of Arizona .....	122,105	10,870	34,622	13,367	2,130	53,315	1,288	6,130	383
9 University of Georgia .....	120,189	3,384	4,884	5,333	5,527	78,923	2,652	19,486	0
10 U CA Davis .....	118,503	7,759	1,391	203	153	107,428	86	1,483	0
Total, 1st 10 insts. ....	1,447,358	238,369	132,013	75,903	35,585	799,522	19,957	123,117	22,892
11 Cornell University .....	115,720	14,446	5,176	1,711	7,877	76,743	1,838	7,929	0
12 Ohio State University .....	112,391	29,716	5,466	2,378	6,284	56,775	508	7,214	4,050
13 University of IL Urbana .....	111,662	22,916	7,282	19,496	9,075	28,312	2,073	8,971	13,537
14 U TX Austin .....	110,032	43,916	20,069	15,637	7,803	7,518	713	11,972	2,404
15 Louisiana State U System ....	106,225	17,597	4,349	11,991	1,401	64,934	191	4,657	1,105
16 Rutgers the State U NJ .....	105,856	12,567	9,566	6,111	5,754	52,619	3,924	11,408	3,907
17 U CA San Francisco .....	104,451	0	0	0	0	104,451	0	0	0
18 MA Institute of Tech .....	98,139	47,751	18,994	2,837	4,197	4,191	730	5,105	14,334
19 Iowa St U of Sci & Tech .....	97,764	20,486	2,577	313	8,188	55,666	493	6,334	3,707
20 NC State U Raleigh .....	93,154	26,529	3,290	4,408	2,758	53,960	129	2,080	0
Total, 1st 20 insts. ....	2,502,752	474,293	208,782	140,785	88,922	1,304,691	30,556	188,787	65,936
21 U CA Los Angeles .....	88,909	7,742	2,495	4,739	952	56,837	1,838	14,306	0
22 U TX MD Anderson Cntr Ctr .....	86,317	0	744	0	1,640	83,933	0	0	0
23 Baylor Col of Medicine .....	84,629	0	0	0	0	84,629	0	0	0
24 University of Connecticut .....	84,003	21,104	2,715	3,584	2,327	40,925	4,203	7,598	1,547
25 Michigan State University ....	80,567	9,674	14,728	477	1,411	45,235	1,922	6,286	834
26 Georgia Institute of Tech .....	77,475	50,889	6,943	3,366	10,572	1,626	657	3,362	60
27 U of Missouri Columbia .....	76,581	9,611	6,045	1,345	322	52,858	490	5,482	428
28 Northwestern University .....	76,540	7,181	3,505	169	932	34,063	329	1,539	28,822
29 Purdue University .....	76,078	16,754	4,404	741	2,037	46,444	802	4,882	14
30 Harvard University .....	75,238	1,220	3,886	2,423	161	36,724	638	29,920	266
Total, 1st 30 insts. ....	3,309,089	598,468	254,247	157,629	109,276	1,787,965	41,435	262,162	97,907
31 VA Polytech Inst & St U .....	74,063	21,973	4,847	4,287	1,138	37,629	924	3,265	0
32 Johns Hopkins U .....	71,914	4,299	3,234	1,684	464	44,951	61	4,274	12,947
33 University of Florida .....	71,262	16,110	6,217	992	2,072	39,933	1,358	2,181	2,399
34 U of Nebraska Lincoln .....	71,029	9,660	2,971	2,825	755	52,808	203	1,807	0
35 U of Tennessee System .....	67,084	14,452	5,036	3,569	2,541	38,428	64	2,215	779
36 University of Washington .....	66,510	8,408	4,247	4,242	409	43,262	469	4,193	1,280
37 Duke University .....	66,057	2,306	1,951	1,187	373	57,124	238	2,822	56
38 U CA San Diego .....	63,902	2,818	5,555	21,655	3,249	27,479	979	2,167	0
39 U of Pennsylvania .....	60,236	4,463	3,360	551	1,619	40,743	126	8,635	739
40 University of Oklahoma .....	58,721	9,956	4,484	7,573	1,803	26,973	1,970	5,962	0
Total, 1st 40 insts. ....	3,979,867	692,913	296,149	206,194	123,699	2,197,295	47,827	299,683	116,107
41 U of South Florida .....	58,604	7,739	820	3,247	62	42,945	2,897	894	0
42 U MD Baltimore Prof Sch .....	58,216	0	0	0	0	58,216	0	0	0
43 Yale University .....	57,950	1,395	2,873	552	621	44,922	4,108	3,479	0
44 University of Kentucky .....	56,137	10,122	346	48	273	42,427	1	513	2,407
45 U of Iowa .....	55,328	8,108	4,321	315	299	37,316	414	3,552	1,003
46 Clemson University .....	55,270	17,444	3,486	475	2,713	26,034	139	4,668	311
47 University of IL Chicago .....	55,137	5,460	3,258	905	588	40,679	480	2,304	1,463
48 University of Colorado .....	54,633	9,292	9,409	7,989	2,602	21,228	2,645	1,399	69
49 Oregon State University .....	52,886	6,167	1,303	4,637	927	37,690	5	1,987	170
50 Stanford University .....	52,297	12,709	4,358	1,016	1,125	28,812	491	3,786	0
Total, 1st 50 insts. ....	4,536,325	771,349	326,323	225,378	132,909	2,577,564	59,007	322,265	121,530

See explanatory information and SOURCE at end of table.

**Table B-41. Non-Federal R&D expenditures at universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
51 Oklahoma State University ..	52,080	7,720	5,554	1,278	231	29,453	207	4,423	3,214
52 U of Southern California .....	50,857	5,314	647	3,858	2,800	32,869	309	4,092	968
53 Auburn University .....	50,713	12,380	2,827	88	194	31,931	24	797	2,472
54 Indiana University .....	50,500	747	8,516	880	1,192	28,523	1,204	3,511	5,927
55 Washington University .....	49,847	917	1,628	1,468	1,028	44,527	70	209	0
56 Washington State U .....	48,756	4,371	1,350	159	163	34,419	133	7,957	204
57 U of NC Chapel Hill .....	48,237	0	1,890	4,244	2,961	33,984	136	5,022	0
58 SUNY Buffalo .....	47,480	14,509	2,741	454	1,364	21,500	3,870	2,959	83
59 University of Kansas .....	47,396	2,989	3,061	7,057	129	26,690	731	1,129	5,610
60 Colorado State University .....	46,652	7,337	1,779	819	836	18,162	204	3,546	13,969
Total, 1st 60 insts. ....	5,028,843	827,633	356,316	245,683	143,807	2,879,622	65,895	355,910	153,977
61 U TX SW Med Ctr Dallas .....	46,315	0	0	0	0	46,315	0	0	0
62 Wayne State University .....	45,260	4,904	4,994	0	413	30,129	452	2,484	1,884
63 U Arkansas Fayetteville .....	43,927	6,792	3,194	958	1,047	28,602	583	2,254	497
64 KS St U Agri & App Sci .....	42,980	6,709	712	83	620	32,213	350	1,384	909
65 University of Virginia .....	42,439	7,093	3,285	1,137	1,152	25,045	672	4,044	11
66 Princeton University .....	41,857	11,952	7,571	3,301	2,553	7,067	2,288	7,125	0
67 U Med & Dent NJ .....	40,886	0	0	0	0	40,886	0	0	0
68 Mississippi State U .....	40,684	4,737	436	446	3	28,323	0	2,331	4,408
69 U CA Riverside .....	39,939	531	838	729	449	36,655	85	652	0
70 SUNY Stony Brook .....	39,794	1,432	6,994	6,633	2,106	20,759	462	1,259	149
Total, 1st 70 insts. ....	5,452,924	871,783	384,340	258,970	152,150	3,175,616	70,787	377,443	161,835
71 Emory University .....	39,701	0	1,496	2	36	32,807	260	5,100	0
72 Carnegie Mellon U .....	39,595	11,258	1,720	2,187	12,156	7,402	1,489	2,206	1,177
73 U of Alabama Birmingham .....	39,028	4,379	214	409	31	33,611	228	156	0
74 Tulane University .....	38,694	4,339	1,474	234	333	28,503	1,094	2,558	159
75 Rockefeller University .....	37,542	0	2,424	0	989	34,129	0	0	0
76 U TX Med Br Galveston .....	37,443	0	0	0	0	37,443	0	0	0
77 University of Pittsburgh .....	36,799	3,391	1,669	21	372	28,112	110	3,102	22
78 New York University .....	36,141	0	682	158	717	27,316	377	6,091	800
79 Arizona State University .....	36,110	15,309	8,135	336	840	2,803	940	5,341	2,406
80 U CA Irvine .....	36,085	4,993	1,825	1	838	26,221	78	2,054	75
Total, 1st 80 insts. ....	5,830,062	915,452	403,979	262,318	168,462	3,433,963	75,363	404,051	166,474
81 University of Cincinnati .....	35,118	7,924	1,661	88	211	24,387	262	97	488
82 University of New Mexico .....	33,870	12,914	1,683	729	1,188	8,837	336	3,828	4,355
83 Case Western Reserve U .....	32,824	8,734	1,475	18	22	19,555	34	2,986	0
84 University Hawaii Manoa .....	32,599	873	5,819	2,932	21	16,870	276	3,056	2,752
85 U MA Amherst .....	32,046	4,869	6,610	4,291	4,855	9,971	506	666	278
86 Utah State University .....	31,837	3,908	1,224	5,302	251	13,879	357	1,110	5,806
87 University of Rochester .....	30,912	3,965	1,554	69	156	21,029	3,585	248	306
88 University of Miami .....	29,403	722	60	2,690	75	25,437	142	272	5
89 U of South Carolina .....	28,812	4,944	1,787	8,236	1,301	7,917	495	3,180	952
90 University of Idaho .....	28,778	4,425	773	1,941	100	20,762	78	699	0
Total, 1st 90 insts. ....	6,146,261	968,730	426,625	288,614	176,642	3,602,607	81,434	420,193	181,416
91 Virginia Commonwealth U .....	28,320	259	950	0	148	25,234	436	1,293	0
92 Texas Tech University .....	27,222	7,586	2,745	1,022	751	12,973	38	1,567	540
93 Temple University .....	27,138	288	609	15	143	19,222	1,039	5,761	61
94 U TX Hlth Sci Ctr San Ant .....	26,772	0	0	0	0	26,772	0	0	0
95 University of Delaware .....	26,457	7,759	3,560	2,095	719	9,136	157	3,031	0
96 North Dakota State U .....	26,215	1,850	2,875	54	376	19,479	180	1,265	136
97 CUNY Mt Sinai Sch of Med .....	25,537	0	0	0	0	25,537	0	0	0
98 Georgetown University .....	25,322	0	1,284	115	312	22,226	14	1,336	35
99 U of Alaska Fairbanks .....	25,180	1,900	3,825	9,162	481	8,403	0	1,842	0
100 Florida State University .....	24,239	353	12,711	3,447	582	3,281	989	2,876	0
Total, 1st 100 insts. ....	6,408,663	988,725	455,184	304,524	179,721	3,774,870	84,287	439,164	182,188

See explanatory information and SOURCE at end of table.



**Table B-41. Non-Federal R&D expenditures at universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
101 West Virginia University .....	23,179	4,038	562	1,615	1,881	13,038	28	1,977	40
102 Rensselaer Polytech Inst .....	22,026	15,863	3,498	475	1,437	328	5	170	250
103 University of Utah .....	22,026	5,849	1,207	979	1,092	12,458	326	115	0
104 Columbia U Main Division .....	22,014	2,492	1,303	275	816	16,206	0	922	0
105 U MA Worcester .....	21,792	0	0	0	0	21,792	0	0	0
106 U of NE Med Ctr Omaha .....	21,538	0	0	0	0	21,538	0	0	0
107 U of Nevada Reno .....	21,467	876	905	1,881	20	7,935	258	1,639	7,953
108 U of Central Florida .....	21,395	3,676	5,547	7,648	226	522	95	591	3,090
109 Rush University .....	21,252	0	0	0	0	18,694	2,558	0	0
110 New Mexico State U .....	21,153	7,134	375	1,359	935	11,047	12	152	139
Total, 1st 110 insts. ....	6,626,505	1,028,653	468,581	318,756	186,128	3,898,428	87,569	444,730	193,660
111 Med U of South Carolina .....	21,072	0	0	0	0	21,072	0	0	0
112 University of Houston .....	20,688	11,429	5,436	674	651	1,251	723	468	56
113 U TX Hlth Sci Ctr Houston .....	20,122	0	0	0	0	20,041	0	81	0
114 Boston University .....	19,565	1,484	1,923	425	24	13,117	119	1,253	1,220
115 Strtn IL U Carbondale .....	18,939	3,211	1,306	406	1,918	6,816	73	1,096	4,113
116 Montana State University .....	18,815	2,282	1,517	169	54	13,540	32	988	233e
117 SUNY Col Env Sci & Frstry .....	18,679	6,823	981	2,014	134	8,557	0	170	0
118 NM Inst Mining & Tech .....	18,667	13,566	1,163	3,543	229	145	1	20	0
119 U of VT & State Agri Col .....	18,309	696	420	40	56	16,270	333	38	456
120 Brown University .....	18,301	2,541	3,304	882	3,019	6,407	681	1,410	57
Total, 1st 120 insts. ....	6,819,662	1,070,685	484,631	326,909	192,213	4,005,644	89,531	450,254	199,795
121 University of Wyoming .....	17,981	1,602	600	4,198	207	8,436	18	103	2,817
122 Oregon Health Sciences U .....	17,947	0i	0i	0i	0i	17,616i	331i	0i	0i
123 Yeshiva University .....	17,865	0	0	0	0	17,865	0	0	0
124 Medical Col of Wisconsin .....	17,428	0	0	0	0	17,428	0	0	0
125 Medical Col of Georgia .....	17,222	0	0	0	0	17,222	0	0	0
126 U CA Santa Cruz .....	16,065	0	8,875	2,309	225	3,248	223	1,185	0
127 University of Chicago .....	15,947	0	1,928	147	228	11,156	331	2,157	0
128 U of Maine Orono .....	15,920	2,154	339	2,222	38	9,627	35	1,505	0
129 U of New Hampshire .....	15,920	2,210	359	6,799	281	4,997	34	707	533
130 Dartmouth College .....	15,828	1,439	642	875	229	12,106	49	468	20
Total, 1st 130 insts. ....	6,987,785	1,078,090	497,374	343,459	193,421	4,125,345	90,552	456,379	203,165
131 Wake Forest University .....	15,785	0	288	0	2	15,315	0	0	180
132 San Diego St University .....	15,631	1,525	655	251	740	6,611	816	1,012	4,021
133 Syracuse University .....	15,625	5,571	1,560	422	4,366	546	552	1,583	1,025
134 NJ Inst of Technology .....	15,506	4,332	844	6,311	410	0	0	38	3,571
135 Lehigh University .....	14,831	10,978	2,212	320	488	555	96	182	0
136 U CA Santa Barbara .....	14,718	4,449	1,865	2,940	1,558	899	676	2,221	110
137 U of PR Mayaguez .....	14,669	1,593	1,401	1,311	179	9,016	0	173	996
138 The University of Alabama .....	14,566	3,914	2,819	958	780	2,168	367	3,472	88
139 Brandeis University .....	14,388	0	656	0	343	4,563	222	8,604	0
140 U MD Center for EES .....	13,642	0	0	13,642	0	0	0	0	0
Total, 1st 140 insts. ....	7,137,146	1,110,452	509,674	369,614	202,287	4,165,018	93,281	473,664	213,156
141 George Washington U .....	13,479	1,167	125	9	308	5,618	149	6,098	5
142 U of Rhode Island .....	13,333	2,080i	321i	2,901i	75i	6,497i	370i	682i	407i
143 Thomas Jefferson U .....	12,813	0	0	0	0	12,813	0	0	0
144 Vanderbilt University .....	12,498	1,778	1,173	17	54	7,872	378	1,226	0
145 U of Missouri Rolla .....	11,897	9,268	1,212	472	199	16	2	0	728
146 California Inst of Tech .....	11,551	2,300	4,355	747	497	3,200	0	51	401
147 Col of William & Mary .....	11,458	0	680	8,946	208	458	183	983	0
148 University of Akron .....	11,057	3,230	6,756	24	172	514	55	306	0
149 Loyola U of Chicago .....	11,002	0	284	0	135	9,343	143	710	387
150 U TX Arlington .....	10,839	7,026	1,604	388	984	396	49	198	194
Total, 1st 150 insts. ....	7,257,073	1,137,301	526,184	383,118	204,919	4,211,745	94,610	483,918	215,278

See explanatory information and SOURCE at end of table.



**Table B-41. Non-Federal R&D expenditures at universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
151 U WI Milwaukee .....	10,790	1,946	1,674	1,704	420	1,167	215	2,840	824
152 University of Louisville .....	10,572	482	240	394	28	8,239	21	1,168	0
153 SUNY Albany .....	10,542	0	1,029	3,308	245	4,152	688	1,120	0
154 Wright State University .....	10,508	1,393	1,282	297	1,609	5,445	209	119	154
155 Tufts University .....	10,351	516	182	569	0	7,748	61	1,275	0
156 Ohio University .....	10,284	5,715	593	89	28	3,554	102	162	41
157 U of Southwestern LA .....	10,189	1,114	351	20	5,113	1,779	120	990	702
158 SUNY Hlth Sci Ctr Brklyn .....	9,729	0	0	0	0	9,729	0	0	0
159 University of Oregon .....	9,273	304	4,069	595	238	2,110	631	1,326	0
160 San Jose State University .....	9,180	2,693	829	5,064	206	122	240	26	0
Total, 1st 160 insts. ....	7,358,491	1,151,464	536,433	395,158	212,806	4,255,790	96,897	492,944	216,999
161 U of Alabama Huntsville .....	9,170	4,519	1,813	675	1,721	281	0	57	104
162 South Dakota State U .....	9,017	765	233	352	2	7,221	0	444	0
163 Drexel University .....	8,979	5,321	628	55	424	698	0	1,853	0
164 Michigan Tech University .....	8,919	6,518i	314i	155i	74i	1,137i	0i	596i	125i
165 University of Mississippi .....	8,817	671	1,072	0	9	6,884	4	177	0
166 U of Nevada Las Vegas .....	8,788	1,373	530	4,261	769	685	5	1,035	130
167 SUNY Binghamton .....	8,755	1,532	1,114	425	853	1,267	1,750	1,814	0
168 Oregon Grad Inst Sci Tech .....	8,697	1,669	3,017	1,935	2,076	0	0	0	0
169 Unif Svcs U of Hlth Sci .....	8,527	0	0	0	0	8,527	0	0	0
170 Rice University .....	8,387	2,202	1,853	1,297	2,105	825	105	0	0
Total, 1st 170 insts. ....	7,446,547	1,176,034	547,007	404,313	220,839	4,283,315	98,761	498,920	217,358
171 U MA Lowell .....	8,333	3,549	1,443	20	371	1,017	46	0	1,887
172 Memphis State University .....	8,236	1,064	153	2,007	48	929	1,688	1,667	680
173 Tennessee Tech U .....	8,212	7,319	248	9	15	602	0	19	0
174 Hahnemann University .....	8,082	0	0	0	0	8,082	0	0	0
175 The Medical Col of PA .....	8,006	0	0	0	0	8,006	0	0	0
176 Woods Hole Ocngrphc Inst .....	7,973	1,151	0	6,822	0	0	0	0	0
177 University of Montana .....	7,866	0	265	205	255	5,160	4	726	1,251
178 U MA Boston .....	7,612	0	56	1,295	2	439	126	5,694	0
179 University of Notre Dame .....	7,330	3,473	2,189	19	37	1,446	44	0	122
180 Inst Paper Sci and Tech .....	7,033	4,283	2,133	0	0	617	0	0	0
Total, 1st 180 insts. ....	7,525,230	1,196,873	553,494	414,690	221,567	4,309,613	100,669	507,026	221,298
181 Univeristy of North Texas .....	6,749	435	985	1,021	1,053	713	282	547	1,713
182 University of Dayton .....	6,719	5,732	608	12	16	184	47	109	11
183 Colorado School of Mines .....	6,594	5,493	285	291	525	0	0	0	0
184 George Mason University .....	6,464	3,490	287	0	666	496	334	1,191	0
185 Georgia State University .....	6,307	0	1,119	145	516	1,124	1,288	1,528	587
186 Western Michigan U .....	6,247	1,522	31	1,984	452	245	106	1,802	105
187 Eastern Virginia Med Sch .....	6,065	0	0	0	0	6,065	0	0	0
188 U of Missouri Kansas City .....	6,009	11	275	13	838	3,959	5	535	373
189 Kent State University .....	5,712	2	4,315	66	319	253	560	187	10
190 Florida Atlantic U .....	5,676	2,021	91	44	1,419	374	70	1,657	0
Total, 1st 190 insts. ....	7,587,772	1,215,579	561,490	418,266	227,371	4,323,026	103,361	514,582	224,097
191 Desert Research Institute .....	5,673	0	0	4,141	0	1,339	0	193	0
192 Brigham Young University .....	5,620	1,773	1,303	11	226	1,371	58	859	19
193 CUNY City College .....	5,616	2,819	1,657	121	35	675	231	78	0
194 Northern Illinois U .....	5,552	849	993	247	209	1,282	144	1,828	0
195 University of Tulsa .....	5,552	4,396	113	83	317	482	95	66	0
196 U TX Dallas .....	5,340	657	1,651	722	393	686	442	789	0
197 Creighton University .....	5,147	0	17	0	0	5,130	0	0	0
198 New York Medical College .....	5,023	0i	0i	0i	0i	5,023i	0i	0i	0i
199 Old Dominion University .....	4,961	895	188	2,734	187	741	12	204	0
200 CA St U Northridge .....	4,949	1,607	677	29	155	1,103	384	345	649
Total, 1st 200 insts. ....	7,641,205	1,228,575	568,089	426,354	228,893	4,340,858	104,727	518,944	224,765
Total, all other sampled insts. ....	313,007	64,507	42,837	20,904	15,940	104,052	10,431	39,164	15,172

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:**  
e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-42. R&D expenditures at public universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
Total, all institutions .....	13,368,412	2,112,914	1,378,245	1,033,163	450,312	7,220,133	242,873	663,913	266,859
1 University of Michigan .....	425,868	74,735	30,577	23,999	21,855	203,823	11,952	52,042	6,885
2 U WI Madison .....	372,362	49,723	36,719	24,004	8,647	212,123	10,749	28,580	1,817
3 University of Washington .....	335,329	18,451	18,591	55,031	6,171	216,655	6,778	9,834	3,818
4 University of Minnesota .....	332,033	28,856	16,735	13,185	17,167	236,421	7,548	12,121	0
5 Texas A&M University .....	322,691	77,413	18,015	74,688	4,866	129,639	1,407	12,430	4,233
6 U CA San Francisco .....	314,599	0	0	0	0	314,599	0	0	0
7 U CA San Diego .....	307,051	13,738	43,430	78,807	10,934	153,495	3,545	3,102	0
8 U CA Berkeley .....	284,346	62,019	63,693	4,888	7,320	114,359	6,870	20,842	4,355
9 Pennsylvania State U .....	282,659	118,454	20,733	18,477	4,495	92,148	5,745	10,551	12,056
10 U CA Los Angeles .....	277,974	27,799	24,577	14,196	7,430	178,798	7,435	17,739	0
Total, 1st 10 insts. ....	3,254,912	471,188	273,070	307,275	88,885	1,852,060	62,029	167,241	33,164
11 University of IL Urbana .....	252,811	53,304	40,517	27,791	19,008	54,529	6,088	12,909	38,665
12 U TX Austin .....	249,158	99,240	64,258	27,457	15,448	20,830	3,364	15,473	3,088
13 University of Arizona .....	235,528	20,093	65,920	20,633	6,077	110,620	2,122	8,685	1,378
14 U MD College Park .....	229,344	48,698	65,431	12,858	14,698	63,254	2,367	22,038	0
15 U CA Davis .....	223,758	15,487	8,859	1,490	654	193,843	913	2,512	0
16 Ohio State University .....	221,460	44,967	18,645	6,756	9,872	114,193	1,118	19,935	5,974
17 University of Colorado .....	193,217	22,942	28,968	32,086	6,323	91,032	8,006	3,791	69
18 U of NC Chapel Hill .....	179,157	0	9,246	9,893	8,649	133,978	2,441	14,950	0
19 University of Pittsburgh .....	178,575	8,740	12,159	314	2,173	145,177	2,210	6,836	966
20 Georgia Institute of Tech .....	175,873	115,523	15,761	7,640	23,999	3,690	1,492	7,632	136
Total, 1st 20 insts. ....	5,393,793	900,182	602,834	454,193	195,786	2,783,206	92,150	282,002	83,440
21 University of Georgia .....	172,274	4,146	7,831	7,187	7,239	120,779	4,310	20,782	0
22 Rutgers the State U NJ .....	161,025	18,932	19,062	8,434	11,468	73,650	6,927	18,600	3,952
23 Louisiana State U System .....	158,823	24,145	10,377	19,076	1,738	95,758	800	5,803	1,126
24 NC State U Raleigh .....	155,624	48,244	8,785	8,945	4,902	81,135	364	3,249	0
25 Michigan State University .....	150,861	18,114	27,577	893	2,642	84,705	3,598	11,771	1,561
26 Purdue University .....	149,032	40,454	16,730	2,221	5,958	74,151	2,301	7,002	215
27 U of Iowa .....	148,811	15,181	16,855	501	1,163	107,808	1,066	4,682	1,555
28 Iowa St U of Sci & Tech .....	148,459	35,955	5,944	819	10,300	79,053	770	11,636	3,982
29 U of Tennessee System .....	143,662	30,248	13,109	13,801	9,411	71,803	234	4,277	779
30 University of Florida .....	142,966	28,912	12,243	1,706	5,379	85,540	2,564	2,950	3,672
Total, 1st 30 insts. ....	6,925,330	1,164,513	741,347	517,776	255,986	3,657,588	115,084	372,754	100,282
31 VA Polytech Inst & St U .....	135,771	45,671	9,249	20,434	2,594	51,095	1,662	5,066	0
32 U of Alabama Birmingham .....	133,790	5,271	703	586	127	125,857	936	310	0
33 University of Connecticut .....	133,054	24,452	3,703	7,387	3,145	76,948	7,241	8,549	1,629
34 SUNY Buffalo .....	128,203	23,732	7,067	686	7,364	80,868	5,051	3,333	102
35 Indiana University .....	127,877	940	29,225	2,167	3,169	75,107	4,704	4,785	7,780
36 U TX MD Anderson Cntr .....	127,475	0	2,824	0	2,653	121,998	0	0	0
37 University of Virginia .....	118,019	19,700	13,536	6,611	4,326	66,704	2,823	4,222	97
38 Colorado State University .....	115,385	16,137	8,372	11,427	1,520	57,825	2,141	3,994	13,969
39 U TX SW Med Ctr Dallas .....	114,258	0	0	0	0	114,258	0	0	0
40 Oregon State University .....	114,004	9,801	4,362	25,240	2,360	68,080	147	3,202	812
Total, 1st 40 insts. ....	8,173,166	1,310,217	820,388	592,314	283,244	4,496,328	139,789	406,215	124,671
41 U MD Baltimore Prof Sch .....	111,772	0	0	0	0	111,772	0	0	0
42 SUNY Stony Brook .....	107,817	2,801	22,141	15,463	5,395	56,711	2,900	2,257	149
43 U of Missouri Columbia .....	106,193	12,362	7,621	1,570	674	74,708	1,128	7,658	472
44 University of IL Chicago .....	105,552	8,056	8,207	1,061	2,415	79,538	2,082	2,727	1,466
45 University of Utah .....	105,263	16,679	9,163	3,672	8,808	65,207	1,346	388	0
46 University of Kentucky .....	102,911	16,729	2,759	144	1,266	72,789	607	1,978	6,639
47 U CA Irvine .....	100,631	8,655	15,236	25	4,373	66,886	79	4,821	556
48 U of Nebraska Lincoln .....	94,959	11,263	7,389	4,186	1,335	67,964	578	2,244	0
49 University of Cincinnati .....	92,512	19,746	4,535	278	599	64,906	403	172	1,873
50 Washington State U .....	92,434	8,762	4,553	482	577	58,054	292	11,384	8,330
Total, 1st 50 insts. ....	9,193,210	1,415,270	901,992	619,195	308,686	5,214,863	149,204	439,844	144,156

See explanatory information and SOURCE at end of table.

**Table B-42. R&D expenditures at public universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
51 University of Oklahoma .....	92,019	14,512	7,585	11,921	4,176	40,577	2,803	10,445	0
52 New Mexico State U .....	85,974	45,450	2,903	10,719	3,447	20,763	52	1,024	1,616
53 Wayne State University .....	85,627	7,014	8,517	0	767	62,874	1,872	2,660	1,923
54 University of Kansas .....	85,134	6,269	5,997	8,026	418	49,786	1,779	1,170	11,689
55 Clemson University .....	78,569	24,798	4,955	675	3,856	37,009	198	6,636	442
56 Utah State University .....	77,263	24,093	5,497	13,544	454	23,112	1,706	1,520	7,337
57 Virginia Commonwealth U .....	77,097	386	2,505	0	277	71,270	996	1,663	0
58 University of New Mexico .....	76,736	30,509	4,390	1,987	1,901	22,264	2,083	4,903	8,699
59 U Med & Dent NJ .....	76,410	0	0	0	0	76,410	0	0	0
60 U of South Florida .....	75,322	10,726	1,560	6,772	140	50,539	4,342	1,243	0
Total, 1st 60 insts. ....	10,003,361	1,579,027	945,901	672,839	324,122	5,669,467	165,035	471,108	175,862
61 U TX Hlth Sci Ctr San Ant .....	75,239	0	0	0	0	75,239	0	0	0
62 University Hawaii Manoa .....	73,961	1,840	22,267	10,262	1,020	29,276	753	3,612	4,931
63 Oklahoma State University .....	72,920	16,433	7,702	1,360	489	38,176	242	5,084	3,434
64 Mississippi State U .....	70,300	15,993	2,079	2,833	270	40,198	0	3,357	5,570
65 U CA Santa Barbara .....	68,775	23,798	16,588	10,085	5,531	3,142	3,155	6,366	110
66 Auburn University .....	68,151	19,690	4,003	231	448	40,054	224	982	2,519
67 U TX Med Br Galveston .....	67,998	0	0	0	0	67,998	0	0	0
68 U of Alaska Fairbanks .....	66,796	2,735 i	14,134 i	32,623 i	72 i	14,797 i	0 i	2,435 i	0 i
69 Arizona State University .....	66,142	21,893	16,914	3,836	2,015	7,438	3,432	8,163	2,451
70 U MA Amherst .....	64,111	9,629	15,077	6,383	12,259	17,123	2,637	723	280
Total, 1st 70 insts. ....	10,697,754	1,691,038	1,044,665	740,452	346,226	6,002,908	175,478	501,830	195,157
71 Florida State University .....	62,929	906	38,281	10,178	1,519	6,720	2,233	3,092	0
72 KS St U Agri & App Sci .....	62,562	9,091	4,214	243	950	44,871	488	1,611	1,094
73 U CA Riverside .....	59,065	552	5,164	1,673	1,017	49,153	753	753	0
74 U TX Hlth Sci Ctr Houston .....	58,786	0	0	0	0	58,178	0	608	0
75 U Arkansas Fayetteville .....	58,325	8,733	5,302	1,188	1,174	37,500	583	2,806	1,039
76 U of South Carolina .....	57,062	9,314	6,346	12,276	4,062	16,307	1,518	5,942	1,297
77 Oregon Health Sciences U .....	56,860	0 i	0 i	0 i	0 i	54,978 i	1,882 i	0 i	0 i
78 University of Houston .....	55,038	23,058	18,860	1,001	1,997	5,728	2,865	1,204	325
79 U MA Worcester .....	54,277	0	0	0	0	54,277	0	0	0
80 West Virginia University .....	54,271	11,184	2,328	6,571	6,364	24,915	34	2,414	461
Total, 1st 80 insts. ....	11,276,929	1,753,876	1,125,160	773,582	363,309	6,355,535	185,834	520,260	199,373
81 Temple University .....	53,686	433	1,103	15	474	36,321	4,906	10,373	61
82 University of Delaware .....	52,627	16,231	8,787	7,034	2,997	11,402	572	5,604	0
83 U of VT & State Agri Col .....	49,839	1,318	1,283	59	162	45,726	703	38	550
84 U of Rhode Island .....	45,942	5,331 i	1,133 i	22,227 i	275 i	9,978 i	3,404 i	2,733 i	861 i
85 University of Idaho .....	44,655	6,720	1,586	2,794	172	32,440	78	865	0
86 Med U of South Carolina .....	42,543	0	0	0	0	42,543	0	0	0
87 U of New Hampshire .....	39,555	4,198	1,599	20,840	799	8,724	211	2,651	533
88 U of Nevada Reno .....	38,564	5,205	1,910	5,181	85	15,775	280	2,003	8,125
89 Texas Tech University .....	38,119	9,927	4,293	1,250	1,130	18,227	78	2,674	540
90 U CA Santa Cruz .....	37,886	0	17,800	7,805	1,636	6,993	845	2,807	0
Total, 1st 90 insts. ....	11,720,345	1,803,239	1,164,654	840,787	371,039	6,583,664	196,911	550,008	210,043
91 SUNY Albany .....	37,860	0	2,540	7,274	669	19,869	3,765	3,743	0
92 North Dakota State U .....	34,971	3,264	4,241	104	575	24,543	266	1,767	211
93 U of Alabama Huntsville .....	34,153	15,097	10,433	2,819	4,565	472	0	75	692
94 U of Central Florida .....	33,922	5,908	8,073	8,225	989	596	369	591	9,171
95 Montana State University .....	32,911	4,383	3,823	395	374	22,132	32	1,248	524
96 University of Wyoming .....	32,556	2,208	2,057	7,855	348	16,679	291	266	2,852
97 San Diego St University .....	32,493	3,586	1,761	629	1,794	15,836	2,902	1,249	4,736
98 U of NE Med Ctr Omaha .....	31,669	0	0	0	0	31,669	0	0	0
99 Unif Svcs U of Hlth Sci .....	30,846	0	0	0	0	30,846	0	0	0
100 University of Oregon .....	30,738	1,945	12,097	1,546	1,099	9,865	2,007	2,179	0
Total, 1st 100 insts. ....	12,052,464	1,839,630	1,209,679	869,634	381,452	6,756,171	206,543	561,126	228,229

See explanatory information and SOURCE at end of table.

**Table B-42. R&D expenditures at public universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
101 SUNY Hlth Sci Ctr Brklyn .....	27,645	0	0	0	0	27,645	0	0	0
102 Sthrn IL U Carbondale .....	26,376	3,491	1,723	563	2,035	12,598	183	1,353	4,430
103 Medical Col of Georgia .....	24,935	0	0	0	0	24,935	0	0	0
104 U of Maine Orono .....	24,879	3,004	536	4,712	38	14,214	390	1,985	0
105 US Naval Postgrad School ..	24,296	7,232	2,419	3,916	6,322	450	0	2,430	1,527
106 NM Inst Mining & Tech .....	24,040	16,757	2,143	4,606	303	210	1	20	0
107 NJ Inst of Technology .....	23,781	7,429	1,485	8,007	660	0	0	84	6,116
108 University of Mississippi .....	23,734	3,206	4,564	0	107	15,000	261	596	0
109 U of PR Mayaguez .....	23,156	2,923	1,973	2,765	293	13,835	0	354	1,013
110 The University of Alabama ...	23,149	7,422	5,291	1,527	857	3,450	407	3,866	329
Total, 1st 110 insts. ....	12,298,455	1,891,094	1,229,813	895,730	392,067	6,868,508	207,785	571,814	241,644
111 Florida A&M University .....	22,777	3,314	2,235	0	91	17,120	5	12	0
112 SUNY Col Env Sci & Frstry ..	21,856	7,074	1,293	2,187	179	10,918	0	205	0
113 Col of William & Mary .....	21,793	0	3,846	14,944	887	715	257	1,144	0
114 Desert Research Institute ....	21,187	0	0	14,680	0	3,500	0	3,007	0
115 San Jose State University ....	21,005	5,770	1,881	9,427	328	598	2,938	63	0
116 Wright State University .....	20,589	2,670	2,607	297	2,028	11,994	674	165	154
117 CUNY City College .....	20,401	6,532	7,260	491	720	4,294	701	156	247
118 University of Louisville .....	19,496	1,116	2,044	560	205	14,320	83	1,168	0
119 U of Nevada Las Vegas .....	19,373	2,275	804	11,234	1,979	1,405	5	1,333	338
120 University North Dakota .....	19,204	10,768	165	1,531	0	4,264	19	1,281	1,176
Total, 1st 120 insts. ....	12,506,136	1,930,613	1,251,948	951,081	398,484	6,937,636	212,467	580,348	243,559
121 U MD Center for EES .....	19,055	0	0	19,055	0	0	0	0	0
122 Michigan Tech University .....	18,696	11,940	1,943	637	181	2,973	0	897	125
123 U WI Milwaukee .....	18,245	3,152	3,236	2,720	480	2,272	486	4,973	926
124 U of Missouri Rolla .....	18,025	13,706	2,472	723	298	67	2	29	728
125 U of PR Med Sci Campus ....	17,574	0	0	0	0	17,574	0	0	0
126 George Mason University ....	15,830	8,239	1,182	1	2,670	889	550	2,299	0
127 U Arkansas Med Sci .....	15,686	0	0	0	0	15,686	0	0	0
128 Ohio University .....	15,452	8,767	1,615	134	78	4,444	102	171	141
129 University of Akron .....	15,385	4,416	8,770	75	618	1,025	55	426	0
130 University of Montana .....	15,169	0	509	342	1,871	9,842	25	1,329	1,251
Total, 1st 130 insts. ....	12,675,253	1,980,833	1,271,675	974,768	404,680	6,992,408	213,687	590,472	246,730
131 U TX Arlington .....	14,834	9,262	2,650	537	1,129	695	68	238	255
132 Western Illinois U .....	14,448	2,814	2,347	2,035	813	4,516	626	952	345
133 U MA Lowell .....	14,292	5,594	4,564	86	626	1,458	69	5	1,890
134 South Dakota State U .....	14,050	1,051	395	897	2	11,113	0	592	0
135 SUNY Binghamton .....	13,760	2,141	1,980	998	1,168	2,015	3,425	2,033	0
136 Colorado School of Mines ....	13,644	10,588	1,611	520	925	0	0	0	0
137 SUNY Hlth Sci Ctr Syrcse ....	13,514	0	0	0	0	13,514	0	0	0
138 U TX Dallas .....	13,371	840	7,270	1,056	501	2,222	683	799	0
139 U of South Alabama .....	12,650	148	217	365	90	10,848	256	632	94
140 U TX El Paso .....	12,480	3,916	1,272	1,160	1,478	2,586	625	1,443	0
Total, 1st 140 insts. ....	12,812,296	2,017,187	1,293,981	982,422	411,412	7,041,375	219,439	597,166	249,314
141 Med Col of Ohio Toledo .....	12,285	0	0	286	118	11,881	0	0	0
142 Georgia State University .....	12,133	0	2,778	275	676	2,976	2,969	1,872	587
143 NC A&T State University .....	12,090	7,351	688	0	133	3,167	89	133	529
144 Kent State University .....	12,075	122	8,136	280	903	682	1,526	416	10
145 Old Dominion University .....	11,875	4,519	1,494	3,456	875	1,219	32	280	0
146 Memphis State University ....	11,740	1,548	254	2,773	225	1,650	2,904	1,706	680
147 Florida International U .....	11,443	5,693	1,018	208	735	1,479	517	1,793	0
148 Florida Atlantic U .....	11,331	5,767	293	44	1,674	551	1,231	1,771	0
149 U of Southwestern LA .....	11,319	1,251	443	111	5,300	2,369	120	1,023	702
150 Northern Illinois U .....	11,215	874	2,116	584	448	3,483	397	3,313	0
Total, 1st 150 insts. ....	12,929,802	2,044,312	1,311,201	990,439	422,499	7,070,832	229,224	609,473	251,822
Total, all other sampled insts. ....	438,610	68,602	67,044	42,724	27,813	149,301	13,649	54,440	15,037

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-43. Federally financed R&D expenditures at public universities and colleges, by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Total, all institutions .....	7,173,300	1,071,837	892,430	631,078	266,904	3,811,186	158,278	243,413	98,174
1 University of Washington .....	268,819	10,043	14,344	50,789	5,762	173,393	6,309	5,641	2,538
2 University of Michigan .....	249,951	44,668	13,510	16,624	15,126	126,885	7,807	22,618	2,713
3 U CA San Diego .....	243,149	10,920	37,875	57,152	7,685	126,016	2,566	935	0
4 U WI Madison .....	213,955	31,278	27,544	16,554	6,268	108,025	8,718	15,393	175
5 U CA San Francisco .....	210,148	0	0	0	0	210,148	0	0	0
6 U CA Los Angeles .....	189,065	20,057	22,082	9,457	6,478	121,961	5,597	3,433	0
7 University of Minnesota .....	174,716	15,735	13,351	4,508	13,870	118,145	6,037	3,070	0
8 Pennsylvania State U .....	160,152	79,610	12,749	10,287	2,754	45,410	2,631	3,982	2,729
9 U CA Berkeley .....	156,394	31,539	51,601	2,978	5,530	53,477	4,465	5,798	1,006
10 University of Pittsburgh .....	141,776	5,349	10,490	293	1,801	117,065	2,100	3,734	944
Total, 1st 10 insts. ....	2,008,125	249,199	203,546	168,642	65,274	1,200,525	46,230	64,604	10,105
11 University of IL Urbana .....	141,149	30,388	33,235	8,295	9,933	26,217	4,015	3,938	25,128
12 U TX Austin .....	139,126	55,324	44,189	11,820	7,645	13,312	2,651	3,501	684
13 University of Colorado .....	138,584	13,650	19,559	24,097	3,721	69,804	5,361	2,392	0
14 U of NC Chapel Hill .....	130,920	0	7,356	5,649	5,688	99,994	2,305	9,928	0
15 Texas A&M University .....	122,533	19,249	9,358	57,072	2,326	31,418	736	2,160	214
16 University of Arizona .....	113,423	9,223	31,298	7,266	3,947	57,305	834	2,555	995
17 Ohio State University .....	109,069	15,251	13,179	4,378	3,588	57,418	610	12,721	1,924
18 U CA Davis .....	105,255	7,728	7,468	1,287	501	86,415	827	1,029	0
19 Georgia Institute of Tech .....	98,398	64,634	8,818	4,274	13,427	2,064	835	4,270	76
20 U of Alabama Birmingham .....	94,762	892	489	177	96	92,246	708	154	0
Total, 1st 20 insts. ....	3,201,344	465,538	378,495	292,957	116,146	1,736,718	65,112	107,252	39,126
21 U of Iowa .....	93,483	7,073	12,534	186	864	70,492	652	1,130	552
22 U MD College Park .....	85,041	21,463	32,674	7,076	5,399	8,551	313	9,565	0
23 University of Utah .....	83,237	10,830	7,956	2,693	7,716	52,749	1,020	273	0
24 SUNY Buffalo .....	80,723	9,223	4,326	232	6,000	59,368	1,181	374	19
25 Indiana University .....	77,377	193	20,709	1,287	1,977	46,584	3,500	1,274	1,853
26 U of Tennessee System .....	76,578	15,796	8,073	10,232	6,870	33,375	170	2,062	0
27 University of Virginia .....	75,580	12,607	10,251	5,474	3,174	41,659	2,151	178	86
28 Purdue University .....	72,954	23,700	12,326	1,480	3,921	27,707	1,499	2,120	201
29 University of Florida .....	71,704	12,802	6,026	714	3,307	45,607	1,206	769	1,273
30 Michigan State University .....	70,294	8,440	12,849	416	1,231	39,470	1,676	5,485	727
Total, 1st 30 insts. ....	3,988,315	587,665	506,219	322,747	156,605	2,162,280	78,480	130,482	43,837
31 Colorado State University .....	68,733	8,800	6,593	10,608	684	39,663	1,937	448	0
32 SUNY Stony Brook .....	68,023	1,369	15,147	8,830	3,289	35,952	2,438	998	0
33 U TX SW Med Ctr Dallas .....	67,943	0	0	0	0	67,943	0	0	0
34 New Mexico State U .....	64,821	38,316	2,528	9,360	2,512	9,716	40	872	1,477
35 U CA Irvine .....	64,546	3,662	13,411	24	3,535	40,665	1	2,767	481
36 NC State U Raleigh .....	62,470	21,715	5,495	4,537	2,144	27,175	235	1,169	0
37 VA Polytech Inst & St U .....	61,708	23,698	4,402	16,147	1,456	13,466	738	1,801	0
38 Oregon State University .....	61,118	3,634	3,059	20,603	1,433	30,390	142	1,215	642
39 University of Cincinnati .....	57,394	11,822	2,874	190	388	40,519	141	75	1,385
40 Rutgers the State U NJ .....	55,169	6,365	9,496	2,323	5,714	21,031	3,003	7,192	45
Total, 1st 40 insts. ....	4,620,240	707,046	569,224	395,369	177,760	2,488,800	87,155	147,019	47,867
41 U CA Santa Barbara .....	54,057	19,349	14,723	7,145	3,973	2,243	2,479	4,145	0
42 U MD Baltimore Prof Sch .....	53,556	0	0	0	0	53,556	0	0	0
43 Louisiana State U System .....	52,598	6,548	6,028	7,085	337	30,824	609	1,146	21
44 University of Georgia .....	52,085	762	2,947	1,854	1,712	41,856	1,658	1,296	0
45 Iowa St U of Sci & Tech .....	50,695	15,469	3,367	506	2,112	23,387	277	5,302	275
46 University of IL Chicago .....	50,415	2,596	4,949	156	1,827	38,859	1,602	423	3
47 University of Connecticut .....	49,051	3,348	988	3,803	818	36,023	3,038	951	82
48 Virginia Commonwealth U .....	48,777	127	1,555	0	129	46,036	560	370	0
49 U TX Hlth Sci Ctr San Ant .....	48,467	0	0	0	0	48,467	0	0	0
50 University of Kentucky .....	46,774	6,607	2,413	96	993	30,362	606	1,465	4,232
Total, 1st 50 insts. ....	5,126,715	761,852	606,194	416,014	189,661	2,840,413	97,984	162,117	52,480

See explanatory information and SOURCE at end of table.

**Table B-43. Federally financed R&D expenditures at public universities and colleges, by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking.	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
51 Utah State University .....	45,426	20,185	4,273	8,242	203	9,233	1,349	410	1,531
52 Washington State U .....	43,678	4,391	3,203	323	414	23,635	159	3,427	8,126
53 University of New Mexico .....	42,866	17,595	2,707	1,258	713	13,427	1,747	1,075	4,344
54 U of Alaska Fairbanks .....	41,616	835 i	10,309 i	23,461 i	24 i	6,394 i	0 i	593 i	0 i
55 University Hawaii Manoa .....	41,362	967	16,448	7,330	999	12,406	477	556	2,179
56 U TX MD Anderson Cntr Ctr .....	41,158	0	2,080	0	1,013	38,065	0	0	0
57 Wayne State University .....	40,367	2,110	3,523	0	354	32,745	1,420	176	39
58 Oregon Health Sciences U .....	38,913	0 i	0 i	0 i	0 i	37,362 i	1,551 i	0 i	0 i
59 Florida State University .....	38,690	553	25,570	6,731	937	3,439	1,244	216	0
60 U TX Hlth Sci Ctr Houston .....	38,664	0	0	0	0	38,137	0	527	0
Total, 1st 60 insts. ....	5,539,455	808,488	674,307	463,359	194,318	3,055,256	105,931	169,097	68,699
61 University of Kansas .....	37,738	3,280	2,936	969	289	23,096	1,048	41	6,079
62 U Med & Dent NJ .....	35,524	0	0	0	0	35,524	0	0	0
63 University of Houston .....	34,350	11,629	13,424	327	1,346	4,477	2,142	736	269
64 University of Oklahoma .....	33,298	4,556	3,101	4,348	2,373	13,604	833	4,483	0
65 U of Rhode Island .....	32,609	3,251 i	812 i	19,326 i	200 i	3,481 i	3,034 i	2,051 i	454 i
66 U MA Worcester .....	32,485	0	0	0	0	32,485	0	0	0
67 U MA Amherst .....	32,065	4,760	8,467	2,092	7,404	7,152	2,131	57	2
68 U of VT & State Agri Col .....	31,530	622	863	19	106	29,456	370	0	94
69 West Virginia University .....	31,092	7,146	1,766	4,956	4,483	11,877	6	437	421
70 U TX Med Br Galveston .....	30,555	0	0	0	0	30,555	0	0	0
Total, 1st 70 insts. ....	5,870,701	843,732	705,676	495,396	210,519	3,246,963	115,495	176,902	76,018
71 Arizona State University .....	30,032	6,584	8,779	3,500	1,175	4,635	2,492	2,822	45
72 Mississippi State U .....	29,616	11,256	1,643	2,387	267	11,875	0	1,026	1,162
73 U of Missouri Columbia .....	29,612	2,751	1,576	225	352	21,850	638	2,176	44
74 U of South Carolina .....	28,250	4,370	4,559	4,040	2,761	8,390	1,023	2,762	345
75 SUNY Albany .....	27,318	0	1,511	3,966	424	15,717	3,077	2,623	0
76 Temple University .....	26,548	145	494	0	331	17,099	3,867	4,612	0
77 University of Delaware .....	26,170	8,472	5,227	4,939	2,278	2,266	415	2,573	0
78 U of Alabama Huntsville .....	24,983	10,578	8,620	2,144	2,844	191	0	18	588
79 U of Nebraska Lincoln .....	23,930	1,603	4,418	1,361	580	15,156	375	437	0
80 US Naval Postgrad School .....	23,640	7,143	2,082	3,757	6,287	450	0	2,398	1,523
Total, 1st 80 insts. ....	6,140,800	896,634	744,585	521,715	227,818	3,344,592	127,382	198,349	79,725
81 U of New Hampshire .....	23,635	1,988	1,240	14,041	518	3,727	177	1,944	0
82 Clemson University .....	23,299	7,354	1,469	200	1,143	10,975	59	1,968	131
83 Unif Svcs U of Hlth Sci .....	22,319	0	0	0	0	22,319	0	0	0
84 U CA Santa Cruz .....	21,821	0	8,925	5,496	1,411	3,745	622	1,622	0
85 Med U of South Carolina .....	21,471	0	0	0	0	21,471	0	0	0
86 University of Oregon .....	21,465	1,641	8,028	951	861	7,755	1,376	853	0
87 Oklahoma State University .....	20,840	8,713	2,148	82	258	8,723	35	661	220
88 KS St U Agri & App Sci .....	19,582	2,382	3,502	160	330	12,658	138	227	185
89 U CA Riverside .....	19,126	21	4,326	944	568	12,498	668	101	0
90 Florida A&M University .....	18,954	2,575 i	2,203 i	0 i	75 i	14,084 i	5 i	12 i	0 i
Total, 1st 90 insts. ....	6,353,312	921,308	776,426	543,589	232,982	3,462,547	130,462	205,737	80,261
91 SUNY Hlth Sci Ctr Brklyn .....	17,916	0	0	0	0	17,916	0	0	0
92 Auburn University .....	17,438	7,310	1,176	143	254	8,123	200	185	47
93 U of Nevada Reno .....	17,097	4,329	1,005	3,300	65	7,840	22	364	172
94 San Diego St University .....	16,862	2,061	1,106	378	1,054	9,225	2,086	237	715
95 U of South Florida .....	16,718	2,987	740	3,525	78	7,594	1,445	349	0
96 University North Dakota .....	16,467	9,371	135	1,179	0	3,890	19	843	1,030
97 University of Idaho .....	15,877	2,295	813	853	72	11,678	0	166	0
98 Desert Research Institute .....	15,514	0	0	10,539	0	2,161	0	2,814	0
99 University of Mississippi .....	14,917	2,535	3,492	0	98	8,116	257	419	0
100 CUNY City College .....	14,785	3,713	5,603	370	685	3,619	470	78	247
Total, 1st 100 insts. ....	6,516,903	955,909	790,496	563,876	235,288	3,542,709	134,961	211,192	82,472
Total, all other sampled insts. ....	656,397	115,928	101,934	67,202	31,616	268,477	23,317	32,221	15,702

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-44. R&D expenditures at private universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
Total, all institutions .....	6,542,940	1,038,384	746,132	284,456	419,160	3,607,592	106,471	232,226	108,519
1 Johns Hopkins U .....	745,515	203,064	116,033	43,880	107,416	249,430	844	9,050	15,798
2 MA Institute of Tech .....	365,553	155,174	101,256	14,666	20,388	35,792	8,043	8,540	21,694
3 Cornell University .....	310,949	43,369	44,976	5,359	31,930	171,569	3,321	10,425	0
4 Stanford University .....	306,676	90,770	46,532	5,761	13,391	142,057	3,559	4,606	0
5 Harvard University .....	257,207	5,274	28,041	9,054	3,963	159,744	3,251	41,102	6,778
6 U of Pennsylvania .....	233,829	14,934	19,047	644	8,136	167,039	2,161	17,192	4,676
7 Yale University .....	226,850	7,200	19,473	2,314	6,138	180,991	6,298	4,436	0
8 Columbia U Main Division .....	204,710	14,743	18,125	28,472	3,887	132,312	2,173	4,998	0
9 Duke University .....	202,434	8,515	12,286	4,024	3,265	158,918	5,202	10,168	56
10 U of Southern California .....	200,822	27,576	7,843	14,596	37,087	103,156	2,330	7,237	997
Total, 1st 10 insts. ....	3,054,545	570,619	413,612	128,770	235,601	1,501,008	37,182	117,754	49,999
11 Washington University .....	179,329	3,510	7,765	3,439	5,546	157,620	736	713	0
12 Baylor Col of Medicine .....	172,252	0	0	0	0	172,252	0	0	0
13 University of Rochester .....	161,810	46,716	14,313	374	2,743	89,730	6,682	946	306
14 Northwestern University .....	154,227	21,017	11,949	790	4,928	75,472	1,867	2,134	36,070
15 New York University .....	129,774	0	3,847	332	11,108	99,503	7,017	6,936	1,031
16 Case Western Reserve U ....	124,691	24,957	5,345	292	409	89,427	403	3,858	0
17 University of Miami .....	120,875	1,680	1,290	22,848	549	83,633	999	9,869	7
18 Emory University .....	120,125	0	6,032	2	296	106,481	989	6,325	0
19 Carnegie Mellon U .....	118,261	26,178	7,323	2,424	56,649	13,916	4,918	5,531	1,322
20 California Inst of Tech .....	115,439	20,384	51,180	12,870	7,001	21,982	0	891	1,131
Total, 1st 20 insts. ....	4,451,328	715,061	522,656	172,141	324,830	2,411,024	60,793	154,957	89,866
21 University of Chicago .....	111,877	0	28,792	3,106	3,537	72,595	1,192	2,655	0
22 Princeton University .....	98,603	24,916	24,518	8,087	8,749	17,767	5,568	8,998	0
23 Vanderbilt University .....	96,181	8,591	7,777	114	548	74,218	2,021	2,900	12
24 Boston University .....	91,158	7,049	10,463	1,117	3,173	63,741	435	1,824	3,356
25 Yeshiva University .....	89,636	0	0	0	0	89,636	0	0	0
26 Woods Hole Ocngrphc Inst ..	81,519	16,999	0	64,520	0	0	0	0	0
27 Tulane University .....	75,634	7,054	2,259	290	495	57,770	1,306	6,292	168
28 CUNY Mt Sinai Sch of Med ..	75,337	0	0	0	0	75,337	0	0	0
29 Rockefeller University .....	74,396	0	6,037	0	1,082	67,277	0	0	0
30 Georgetown University .....	73,785	0	5,418	676	1,264	63,357	84	2,780	206
Total, 1st 30 insts. ....	5,319,454	779,670	607,920	250,051	343,678	2,992,722	71,399	180,406	93,608
31 Dartmouth College .....	59,920	6,139	2,976	1,447	1,115	47,169	326	721	27
32 Wake Forest University .....	57,646	0	864	0	88	56,478	0	0	216
33 Brown University .....	57,152	9,073	8,330	4,858	9,632	20,632	2,111	2,459	57
34 Tufts University .....	56,976	2,219	1,797	4,035	143	46,187	906	1,689	0
35 Thomas Jefferson U .....	51,106	0	0	0	0	51,106	0	0	0
36 Medical Col of Wisconsin ....	48,689	0	0	0	0	48,689	0	0	0
37 University of Dayton .....	45,052	40,390	1,626	126	778	491	1,304	326	11
38 Rensselaer Polytech Inst .....	44,132	31,787	7,007	951	2,879	657	10	341	500
39 George Washington U .....	41,177	6,883	1,148	33	6,858	15,828	1,297	9,119	11
40 Brandeis University .....	36,213	0	3,387	0	1,080	16,766	1,385	13,595	0
Total, 1st 40 insts. ....	5,817,517	876,161	635,055	261,501	366,251	3,296,725	78,738	208,656	94,430
41 Rush University .....	34,039	0	0	0	0	29,897	4,142	0	0
42 Syracuse University .....	32,443	9,938	5,255	967	6,720	4,631	1,330	2,254	1,348
43 Lehigh University .....	30,869	23,087	4,981	948	635	676	294	248	0
44 Rice University .....	30,403	5,293	8,853	2,794	9,386	3,727	314	36	0
45 Loyola U of Chicago .....	29,232	0	675	0	959	25,291	156	1,642	509
46 The Medical Col of PA .....	24,996	0	0	0	0	24,996	0	0	0
47 University of Notre Dame .....	23,745	6,591	13,364	19	359	2,929	270	75	138
48 St Louis University .....	20,826	0	8	854	68	19,886	0	0	10
49 Drexel University .....	20,314	13,027	1,928	844	932	1,473	0	2,110	0
50 Northeastern University .....	18,517	6,465	3,515	321	2,236	4,734	995	251	0
Total, 1st 50 insts. ....	6,082,901	940,562	673,634	268,248	387,546	3,414,965	86,239	215,272	96,435

See explanatory information and SOURCE at end of table.

**Table B-44. R&D expenditures at private universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
51 New York Medical College .....	18,491	0i	0i	0i	0i	18,491i	0i	0i	0i
52 Howard University .....	18,427	3,111	2,184	0	1,081	10,371	613	854	213
53 Oregon Grad Inst Sci Tech .....	18,288	4,055	6,128	3,590	4,515	0	0	0	0
54 Hahnemann University .....	17,756	0	0	0	0	17,756	0	0	0
55 Eastern Virginia Med Sch .....	15,818	0	0	0	0	15,818	0	0	0
56 Stevens Institute Tech .....	14,004	13,367	633	0	4	0	0	0	0
57 Mercer University .....	13,771	11,784	230	0	0	1,757	0	0	0
58 Brigham Young University .....	13,587	6,214	2,340	114	462	2,706	137	1,469	145
59 Clark Atlanta University .....	12,057	1,378	3,695	125	1,900	4,706	0	253	0
60 Albany Medical College .....	11,845	0	0	0	0	11,845	0	0	0
Total, 1st 60 insts. ....	6,236,945	980,471	688,844	272,077	395,508	3,498,415	86,989	217,848	96,793
61 Worcester Polytech Inst .....	11,484	4,936	299	0	6,068	180	0	1	0
62 Boston College .....	10,731	0	2,574	587	6,211	807	190	362	0
63 Clarkson University .....	10,586	7,611	1,559	0	805	537	74	0	0
64 Polytechnic University .....	9,424	6,828i	2,442i	0i	72i	0i	0i	0i	82i
65 Meharry Medical College .....	9,283	0	0	428	0	8,855	0	0	0
66 Creighton University .....	9,109	0	115	12	0	8,982	0	0	0
67 Loma Linda University .....	9,030	0	0	196	0	8,834	0	0	0
68 University of Denver .....	8,595	567	3,532	21	46	1,069	2,624	736	0
69 Inst Paper Sci and Tech .....	8,344	4,712	3,015	0	0	617	0	0	0
70 Illinois Inst of Tech .....	8,252	3,768	870	120	121	2,917	382	44	30
Total, 1st 70 insts. ....	6,331,783	1,008,893	703,250	273,441	408,831	3,531,213	90,259	218,991	96,905
71 Catholic U of America .....	7,926	1,167	4,978	0	0	469	524	788	0
72 University of Tulsa .....	7,889	4,876	433	677	383	1,176	253	91	0
73 Morehouse School of Med .....	7,448	0	0	0	0	7,024	0	0	424
74 Southern Methodist U .....	7,037	857	928	2,223	726	916	111	836	440
75 Finch U Hlth Sci Chicago .....	6,928	0	0	0	0	6,873	55	0	0
76 C R Drew U of Med & Sci .....	6,852	0	0	0	0	6,852	0	0	0
77 Rochester Inst of Tech .....	6,331	333	5	0	20	1,023	0	39	4,911
78 Florida Inst of Tech .....	5,866	1,578	1,167	1,182	484	1,436	17	0	2
79 Tuskegee University .....	5,500	773	305	0	0	4,301	0	56	65
80 Marquette University .....	4,896	2,095	536	0	350	1,596	201	118	0
Total, 1st 80 insts. ....	6,398,456	1,020,572	711,602	277,523	410,794	3,562,879	91,420	220,919	102,747
81 Wesleyan University .....	4,804	0i	1,858i	66i	732i	1,863i	167i	118i	0i
82 Hampton University .....	4,597	200	3,765	136	496	0	0	0	0
83 Alfred University .....	4,479	4,479	0	0	0	0	0	0	0
84 American University .....	3,903	0	1,331	0	63	1,105	262	1,142	0
85 Gallaudet University .....	3,535	0	0	0	0	1,195	853	931	556
86 Texas Christian U .....	3,170	14	704	30	9	173	2,211	29	0
87 Xavier University of LA .....	3,169	0	780	103	0	2,286	0	0	0
88 Forest Inst of Prof Psy .....	2,717	0	0	0	0	0	2,717	0	0
89 Ponce School of Medicine .....	2,591	0	0	0	0	2,591	0	0	0
90 Institute of Textile Tech .....	2,412	1,596	397	160	259	0	0	0	0
Total, 1st 90 insts. ....	6,433,833	1,026,861	720,437	278,018	412,353	3,572,092	97,630	223,139	103,303
91 Clark University .....	2,311	0	1,130	665	63	78	313	62	0
92 Bryn Mawr College .....	2,310	0	648	94	317	629	198	424	0
93 Occidental College .....	2,220	0	515	90	32	1,570	7	6	0
94 Embry Riddle Aeronautcl U .....	2,124	0	0	0	0	0	0	0	2,124
95 U of Detroit Mercy .....	2,069	267	1,209	379	0	214	0	0	0
96 U Ctrl Del Caribe Esc Med .....	1,977	0	0	0	0	1,729	0	248	0
97 Harvey Mudd College .....	1,944	1,063	340	0	362	179	0	0	0
98 Williams College .....	1,853	382i	486i	33i	133i	579i	25i	56i	159i
99 Santa Clara University .....	1,815	989	119	0	84	254	8	361	0
100 Fordham University .....	1,737	0	17	0	50	399	23	1,248	0
Total, 1st 100 insts. ....	6,454,193	1,029,562	724,901	279,279	413,394	3,577,723	98,204	225,544	105,586
Total, all other sampled insts. ....	88,747	8,822	21,231	5,177	5,766	29,869	8,267	6,682	2,933

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-45. Federally financed R&D expenditures at private universities and colleges,  
by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
Total, all institutions .....	4,783,840	786,379	621,021	239,283	357,735	2,571,629	75,908	94,618	37,267
1 Johns Hopkins U .....	673,601	198,765	112,799	42,196	106,952	204,479	783	4,776	2,851
2 MA Institute of Tech .....	267,414	107,423	82,262	11,829	16,191	31,601	7,313	3,435	7,360
3 Stanford University .....	254,379	78,061	42,174	4,745	12,266	113,245	3,068	820	0
4 Cornell University .....	195,229	28,923	39,800	3,648	24,053	94,826	1,483	2,496	0
5 Columbia U Main Division .....	182,696	12,251	16,822	28,197	3,071	116,106	2,173	4,076	0
6 Harvard University .....	181,969	4,054	24,155	6,631	3,802	123,020	2,613	11,182	6,512
7 U of Pennsylvania .....	173,593	10,471	15,687	93	6,517	126,296	2,035	8,557	3,937
8 Yale University .....	168,900	5,805	16,600	1,762	5,517	136,069	2,190	957	0
9 U of Southern California .....	149,965	22,262	7,196	10,738	34,287	70,287	2,021	3,145	29
10 Duke University .....	136,377	6,209	10,335	2,837	2,892	101,794	4,964	7,346	0
Total, 1st 10 insts. ....	2,384,123	474,224	367,830	112,676	215,548	1,117,723	28,643	46,790	20,689
11 University of Rochester .....	130,898	42,751	12,759	305	2,587	68,701	3,097	698	0
12 Washington University .....	129,482	2,593	6,137	1,971	4,518	113,093	666	504	0
13 California Inst of Tech .....	103,888	18,084	46,825	12,123	6,504	18,782	0	840	730
14 University of Chicago .....	95,930	0	26,864	2,959	3,309	61,439	861	498	0
15 New York University .....	93,633	0	3,165	174	10,391	72,187	6,640	845	231
16 Case Western Reserve U ....	91,867	16,223	3,870	274	387	69,872	369	872	0
17 University of Miami .....	91,472	958	1,230	20,158	474	58,196	857	9,597	2
18 Baylor Col of Medicine .....	87,623	0	0	0	0	87,623	0	0	0
19 Vanderbilt University .....	83,683	6,813	6,604	97	494	66,346	1,643	1,674	12
20 Emory University .....	80,424	0	4,536	0	260	73,674	729	1,225	0
Total, 1st 20 insts. ....	3,373,023	561,646	479,820	150,737	244,472	1,807,636	43,505	63,543	21,664
21 Carnegie Mellon U .....	78,666	14,920	5,603	237	44,493	6,514	3,429	3,325	145
22 Northwestern University .....	77,687	13,836	8,444	621	3,996	41,409	1,538	595	7,248
23 Woods Hole Ocngrphc Inst ..	73,546	15,848	0	57,698	0	0	0	0	0
24 Yeshiva University .....	71,771	0	0	0	0	71,771	0	0	0
25 Boston University .....	71,593	5,565	8,540	692	3,149	50,624	316	571	2,136
26 Princeton University .....	56,746	12,964	16,947	4,786	6,196	10,700	3,280	1,873	0
27 CUNY Mt Sinai Sch of Med ..	49,800	0	0	0	0	49,800	0	0	0
28 Georgetown University .....	48,463	0	4,134	561	952	41,131	70	1,444	171
29 Tufts University .....	46,625	1,703	1,615	3,466	143	38,439	845	414	0
30 Dartmouth College .....	44,092	4,700	2,334	572	886	35,063	277	253	7
Total, 1st 30 insts. ....	3,992,012	631,182	527,437	219,370	304,287	2,153,087	53,260	72,018	31,371
31 Wake Forest University .....	41,861	0	576	0	86	41,163	0	0	36
32 Brown University .....	38,851	6,532	5,026	3,976	6,613	14,225	1,430	1,049	0
33 University of Dayton .....	38,333	34,658	1,018	114	762	307	1,257	217	0
34 Thomas Jefferson U .....	38,293	0	0	0	0	38,293	0	0	0
35 Tulane University .....	36,940	2,715	785	56	162	29,267	212	3,734	9
36 Rockefeller University .....	36,854	0	3,613	0	93	33,148	0	0	0
37 Medical Col of Wisconsin .....	31,261	0	0	0	0	31,261	0	0	0
38 George Washington U .....	27,698	5,716	1,023	24	6,550	10,210	1,148	3,021	6
39 Rensselaer Polytech Inst .....	22,106	15,924	3,509	476	1,442	329	5	171	250
40 Rice University .....	22,016	3,091	7,000	1,497	7,281	2,902	209	36	0
Total, 1st 40 insts. ....	4,326,225	699,818	549,987	225,513	327,276	2,354,192	57,521	80,246	31,672
41 Brandeis University .....	21,825	0	2,731	0	737	12,203	1,163	4,991	0
42 St Louis University .....	18,583	0	7	854	68	17,644	0	0	10
43 Loyola U of Chicago .....	18,230	0	391	0	824	15,948	13	932	122
44 The Medical Col of PA .....	16,990	0	0	0	0	16,990	0	0	0
45 Syracuse University .....	16,818	4,367	3,695	545	2,354	4,085	778	671	323
46 University of Notre Dame .....	16,415	3,118	11,175	0	322	1,483	226	75	16
47 Lehigh University .....	16,038	12,109	2,769	628	147	121	198	66	0
48 Northeastern University .....	15,339	5,014	3,213	250	2,188	3,599	949	126	0
49 Howard University .....	14,819	2,324	1,968	0	1,065	8,039	576	634	213
50 New York Medical College ...	13,468	0	0	0	0	13,468	0	0	0
Total, 1st 50 insts. ....	4,494,750	726,750	575,936	227,790	334,981	2,447,772	61,424	87,741	32,356

See explanatory information and SOURCE at end of table.

**Table B-45. Federally financed R&D expenditures at private universities and colleges, by science and engineering field: fiscal year 1993**

[Dollars in thousands]

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Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
51 Rush University .....	12,787	0	0	0	0	11,203	1,584	0	0
52 Drexel University .....	11,335	7,706	1,300	789	508	775	0	257	0
53 Stevens Institute Tech .....	10,552	9,978	573	0	1	0	0	0	0
54 Clark Atlanta University .....	10,484	1,162	3,271	112	1,682	4,125	0	132	0
55 Mercer University .....	10,241	9,579	0	0	0	662	0	0	0
56 Eastern Virginia Med Sch .....	9,753	0	0	0	0	9,753	0	0	0
57 Hahnemann University .....	9,674	0	0	0	0	9,674	0	0	0
58 Oregon Grad Inst Sci Tech .....	9,591	2,386	3,111	1,655	2,439	0	0	0	0
59 Worcester Polytech Inst .....	9,164	2,824	228	0	6,001	110	0	1	0
60 Meharry Medical College .....	9,074	0	0	428	0	8,646	0	0	0
Total, 1st 60 insts. ....	4,597,405	760,385	584,419	230,774	345,612	2,492,720	63,008	88,131	32,356
61 Albany Medical College .....	8,564	0	0	0	0	8,564	0	0	0
62 Boston College .....	8,151	0	2,222	430	4,584	694	109	112	0
63 Brigham Young University .....	7,967	4,441	1,037	103	236	1,335	79	610	126
64 University of Denver .....	7,555	543	2,929	21	46	993	2,329	694	0
65 Morehouse School of Med .....	6,597	0	0	0	0	6,429	0	0	168
66 C R Drew U of Med & Sci .....	6,483	0	0	0	0	6,483	0	0	0
67 Polytechnic University .....	6,394	4,728i	1,553i	0i	68i	0i	0i	0i	45i
68 Illinois Inst of Tech .....	6,349	2,558	397	17	117	2,857	374	0	29
69 Catholic U of America .....	5,796	1,131	3,513	0	0	393	464	295	0
70 Clarkson University .....	5,795	3,963	741	0	635	385	71	0	0
Total, 1st 70 insts. ....	4,667,056	777,749	596,811	231,345	351,298	2,520,853	66,434	89,842	32,724
71 Tuskegee University .....	5,154	724	222	0	0	4,087	0	56	65
72 Finch U Hlth Sci Chicago .....	5,033	0	0	0	0	5,013	20	0	0
73 Loma Linda University .....	4,963	0	0	174	0	4,789	0	0	0
74 Southern Methodist U .....	4,932	309	487	2,038	540	824	106	485	143
75 Hampton University .....	4,597	200	3,765	136	496	0	0	0	0
76 Creighton University .....	3,962	0	98	12	0	3,852	0	0	0
77 American University .....	3,569	0	1,189	0	62	1,104	251	963	0
78 Xavier University of LA .....	3,145	0	780	103	0	2,262	0	0	0
79 Gallaudet University .....	2,944	0	0	0	0	1,058	676	726	484
80 Texas Christian U .....	2,693	12	339	11	8	118	2,202	3	0
Total, 1st 80 insts. ....	4,708,048	778,994	603,691	233,819	352,404	2,543,960	69,689	92,075	33,416
81 Wesleyan University .....	2,611	0i	1,190i	9i	536i	703i	149i	24i	0i
82 Marquette University .....	2,524	674	340	0	169	1,140	201	0	0
83 Ponce School of Medicine .....	2,436	0	0	0	0	2,436	0	0	0
84 University of Tulsa .....	2,337	480	320	594	66	694	158	25	0
85 Florida Inst of Tech .....	1,903	401	256	257	117	872	0	0	0
86 Clark University .....	1,717	0	1,040	406	37	37	165	32	0
87 Wentworth Inst of Tech .....	1,634	0	0	1,634	0	0	0	0	0
88 Embry Riddle Aeronautcl U .....	1,614	0	0	0	0	0	0	0	1,614
89 Rochester Inst of Tech .....	1,561	89	5	0	17	726	0	39	685
90 Occidental College .....	1,513e	0	442	90	0	975e	0	6	0
Total, 1st 90 insts. ....	4,727,898	780,638	607,284	236,809	353,346	2,551,543	70,362	92,201	35,715
91 Wellesley College .....	1,464e	0e	294e	0e	67e	806e	0e	297e	0e
92 U Ctrl Del Caribe Esc Med .....	1,426	0	0	0	0	1,426	0	0	0
93 Fisk University .....	1,418	0	1,222	0	0	196	0	0	0
94 Inst Paper Sci and Tech .....	1,311	429	882	0	0	0	0	0	0
95 Bryn Mawr College .....	1,277	0	416	55	214	283	107	202	0
96 Morris Brown College .....	1,227	0	100	0	0	0	1,127	0	0
97 Loyola College .....	1,131	1,044	44	0	43	0	0	0	0
98 Morehouse College .....	1,117	0	36	0	0	685	396	0	0
99 Hofstra University .....	1,073	364	0	0	563	146	0	0	0
100 University of the Pacific .....	1,043	0	81	0	0	962e	0	0	0
Total, 1st 100 insts. ....	4,740,385	782,475	610,359	236,864	354,233	2,556,047	71,992	92,700	35,715
Total, all other sampled insts. ....	43,455	3,904	10,662	2,419	3,502	15,582	3,916	1,918	1,552

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-46. Total and federally financed R&D expenditures at historically black colleges and universities: fiscal years 1990-93**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	191,522	178,777	150,763	142,478	157,310	146,624	122,682	116,822
1 Florida A&M University .....	22,777	22,230	18,552	15,847	18,954	18,698	15,592	13,110
2 Howard University .....	18,427	17,576	15,731	17,382	14,819	13,976	10,754	13,067
3 NC A&T State University .....	12,090	11,914	10,427	8,657	8,759	8,196	8,205	7,503
4 Clark Atlanta University .....	12,057	11,483	8,655	7,896i	10,484	9,985	6,538	6,055i
5 Alabama A&M University .....	9,316	7,053	6,699	7,010	7,295	5,635	5,481	5,560
6 Meharry Medical College .....	9,283	7,258	7,249	6,663	9,074	6,673	7,014	6,391
7 Morehouse School of Med .....	7,448	7,106	6,291	5,891	6,597	6,155	5,652i	5,149
8 Southern U All Campuses .....	6,837	6,813	5,942	5,278i	4,828	4,407	4,332	4,066i
9 U of the Virgin Islands .....	6,189	5,753i	5,318i	4,883e	2,283	2,403i	2,521i	2,639e
10 Prairie View A&M U .....	5,931	6,098	3,623	3,521	4,885	4,824	3,373	3,406
Total, 1st 10 insts. ....	110,355	103,284	88,487	83,028	87,978	80,952	69,462	66,946
11 Tuskegee University .....	5,500	4,800	4,426	5,089	5,154	4,498	4,137	4,783
12 Tennessee State U .....	5,252	4,475	3,709	3,300	5,245	4,465	3,701	3,290
13 Virginia State University .....	4,801	6,075	5,795	3,258	4,761	6,031	5,347	2,744
14 Hampton University .....	4,597	3,272	3,345	2,307	4,597	3,272	3,345	2,307
15 Jackson State University .....	4,371	4,065	3,912	3,762	3,831	3,849	3,429	3,381
16 Texas Southern U .....	4,220	2,329	2,101	1,546	3,652	2,028	1,810	1,363
17 South Carolina State Col .....	4,103	3,665	2,526	2,593	2,460	2,075	1,309	1,308
18 Albany State College .....	3,733	2,339	1,172	1,173	1,068	627	536	516
19 U Arkansas Pine Bluff .....	3,247	2,372	2,419	1,188	2,164	2,372	2,176	1,188
20 University of DC .....	3,208i	2,900	2,865	2,569	1,808i	1,600	1,585	1,455
Total, 1st 20 insts. ....	153,387	139,576	120,757	109,813	122,718	111,769	96,837	89,281
21 Xavier University of LA .....	3,169	2,379	2,424	1,902	3,145	2,365	2,424	1,902
22 Alcorn State University .....	3,129	2,517	2,041	1,935	3,038	2,132	1,665	1,487
23 U MD Eastern Shore .....	3,045	3,640	1,620	1,850	2,691	3,096	1,371	1,552
24 Lincoln University .....	2,958	3,194	3,027	2,771	2,726	2,851	2,763	2,600
25 Fort Valley State College .....	2,749	2,711	2,370	2,313	2,413	2,384	2,047	1,938
26 Kentucky State University .....	2,349	2,525	2,026	2,856	2,349	2,525	2,026	2,856
27 Central State University .....	1,889	1,691	1,640	3,976	1,272	930	680	2,323
28 Langston University .....	1,881	1,750	1,310	1,200	1,570	1,446	1,310	1,200
29 Fisk University .....	1,502	1,317	641	1,156	1,418	1,235	616	1,156
30 Morgan State University .....	1,496	1,223	701	657	1,456	1,179	683	655
Total, 1st 30 insts. ....	177,554	162,523	138,557	130,429	144,796	131,912	112,422	106,950
31 Tougaloo College .....	1,415	1,302	1,262	1,028	636	702	684	566
32 Delaware State University .....	1,262	1,387	1,330	1,027	1,262	1,253	915	920
33 Morris Brown College .....	1,227	1,341e	887	647e	1,227	1,217e	442	464e
34 Morehouse College .....	1,119	1,223	926	868	1,117	1,214	917	868
35 Elizabeth City State U .....	1,050	341	0	15	605	339	0	15
36 Spelman College .....	603	547	444	505	569	514	358	348
37 Benedict College .....	600	702	0	0	600	702	0	0
38 Norfolk State University .....	566	793	752	826	566	769	726	825
39 Alabama State University .....	534	614	448	423	528	502	442	403
40 Winston Salem State U .....	529	583	617	532	529	583	617	532
Total, 1st 40 insts. ....	186,459	171,356	145,223	136,300	152,435	139,707	117,523	111,891
41 Lincoln University (PA) .....	505	1,090	510	845	432	953	437	632
42 Bowie State University .....	465	425	234	35	465	425	234	35
43 Selma University .....	420	798	650	790	420	798	650	790
44 Johnson C Smith U .....	377	276	475	477	377	276	454	467
45 Rust College .....	346	798	289	156	346	798	271	156
46 Jarvis Christian College .....	336	97	60	75	336	97	60	75
47 North Carolina Central U .....	335	755	477i	199	313	683	441i	199
48 Fayetteville State U .....	273	187	275	154	273	187	275	154
49 Bethune Cookman College ..	221	626	599	554	218	590	548	494
50 Mississippi Valley St U .....	213	71	64	43	213	71	64	43
Total, 1st 50 insts. ....	189,950	176,479	148,856	139,628	155,828	144,585	120,957	114,936

See explanatory information and SOURCE at end of table.



**Table B-46. Total and federally financed R&D expenditures at historically black colleges and universities: fiscal years 1990-93**

[Dollars in thousands]

Page 2 of 2

Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
51 Grambling State U .....	210	277 i	343 i	409	155	164 i	173 i	182
52 Wilberforce University .....	200	--	--	--	200	--	--	--
53 West Virginia State Col .....	190	179	218	146	161	172	210	138
54 Oakwood College .....	186	206	179	226	186	206	179	226
55 Claflin College .....	180	240	383	205	180	240	381	203
56 Savannah State College .....	173	195	212	221	168	195	212	221
57 Philander Smith College .....	157	145	154	120	157	136	154	120
58 Bennett College .....	123	914	64	425	122	784	62	358
59 Coppin State College .....	77	103	212	1,017	77	103	212	387
60 Shaw University .....	53	6	0	0	53	6	0	0
Total, 1st 60 insts. ....	191,499	178,744	150,621	142,397	157,287	146,591	122,540	116,771
61 Knoxville College .....	23 e	33 i	42 i	51 i	23 i	33 i	42 i	46 i
62 Dillard University .....	0	0	0	0	0	0	0	0
63 Talladega College .....	0	0	0	0	0	0	0	0
64 Trenholm State Tech Col .....	0	0	100	30	0	0	100	5
65 Voorhees College .....	0	0	0	0	0	0	0	0
Total, 1st 65 insts. ....	191,522	178,777	150,763	142,478	157,310	146,624	122,682	116,822

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-47. Total and federally financed R&D expenditures in engineering at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	3,151,298	3,059,686	2,902,514	2,656,327	1,858,216	1,752,149	1,637,777	1,525,696
1 Johns Hopkins U .....	203,064	225,382	216,567	204,793	198,765	220,774	211,994	200,964
2 MA Institute of Tech .....	155,174	140,969	132,421	127,004	107,423	93,025	87,421	85,559
3 Pennsylvania State U .....	118,454	119,878	120,336	118,070	79,610	77,248	78,021	74,737
4 Georgia Institute of Tech .....	115,523	122,215	124,708	116,867	64,634	68,676	71,606	65,901
5 U TX Austin .....	99,240	85,430	86,521	58,968	55,324	48,462	43,157	26,031
6 Stanford University .....	90,770	107,500	92,511	87,187	78,061	79,342	73,304	75,484
7 Texas A&M University .....	77,413	77,462	65,627	62,791	19,249	17,648	12,826	13,388
8 University of Michigan .....	74,735	64,901	63,841	53,905	44,668	36,413	36,653	31,447
9 U CA Berkeley .....	62,019	62,178	57,481	52,124	31,539	29,710	29,047	29,399
10 University of IL Urbana .....	53,304	53,044	54,694	49,299	30,388	28,768	29,347	28,734
Total, 1st 10 insts. ....	1,049,696	1,058,959	1,014,707	931,008	709,661	700,066	673,376	631,644
11 U WI Madison .....	49,723	46,312	43,341	39,781	31,278	28,565	25,715	24,474
12 U MD College Park .....	48,698	47,806	36,868	43,964	21,463	22,857	16,331	16,336
13 NC State U Raleigh .....	48,244	44,797	46,343	40,181	21,715	18,135	17,192	15,077
14 University of Rochester .....	46,716	29,559	22,304	22,858	42,751	25,786	19,284	19,203
15 VA Polytech Inst & St U .....	45,671	49,830	48,407	44,473	23,698	25,142	24,273	22,304
16 New Mexico State U .....	45,450	46,532	44,091	35,725	38,316	39,864	37,980	32,984
17 Ohio State University .....	44,967	43,764	43,054	43,854	15,251	16,395	15,808	13,771
18 Cornell University .....	43,369	43,951	43,632	39,663	28,923	27,932	24,456	22,780
19 Purdue University .....	40,454	37,949	35,130	32,466	23,700	22,140	19,814	18,301
20 University of Dayton .....	40,390	36,186	33,660	30,722	34,658	30,744	27,703	24,163
Total, 1st 20 insts. ....	1,503,378	1,485,645	1,411,537	1,304,695	991,414	957,626	901,932	841,037
21 Iowa St U of Sci & Tech .....	35,955	31,512	36,768	26,974	15,469	14,732	12,747	11,496
22 Rensselaer Polytech Inst .....	31,787	37,898	37,927	33,843	15,924	18,149	17,692	16,466
23 University of New Mexico .....	30,509	26,979	22,083	20,402	17,595	17,494	11,226	10,689
24 U of Tennessee System .....	30,248	27,569	30,817	27,124	15,796	15,725	15,411	15,280
25 University of Florida .....	28,912	24,476	29,445	30,585	12,802	11,261	13,936	14,766
26 University of Minnesota .....	28,856	26,053	27,460	27,943	15,735	12,894	10,524	10,781
27 U CA Los Angeles .....	27,799	28,471	25,715	24,213	20,057	20,499	19,259	16,873
28 U of Southern California .....	27,576	26,816	24,010	27,713	22,262	20,511	19,446	18,427
29 Carnegie Mellon U .....	26,178	27,183	24,615	24,000	14,920	14,832	14,021	13,040
30 Case Western Reserve U .....	24,957	25,066	23,770	19,049	16,223	15,877	15,564	12,638
Total, 1st 30 insts. ....	1,796,155	1,767,668	1,694,147	1,566,541	1,158,197	1,119,600	1,051,758	981,493
31 Princeton University .....	24,916	21,289	20,134	23,048	12,964	10,989	10,283	11,931
32 Clemson University .....	24,798	23,977	18,715	16,414	7,354	6,327	5,134	4,703
33 University of Connecticut .....	24,452	23,024	22,912	22,160	3,348	3,488	2,649	3,450
34 Louisiana State U System .....	24,145	22,443	31,768	20,890	6,548	6,255	18,351	8,345
35 Utah State University .....	24,093	38,155	44,842	40,694	20,185	31,565	40,709	38,495
36 U CA Santa Barbara .....	23,798	23,647	20,648	22,214	19,349	19,643	16,677	18,807
37 SUNY Buffalo .....	23,732	28,827	22,881	23,166	9,223	7,930	7,579	7,900
38 Lehigh University .....	23,087	23,621	20,185	19,596	12,109	12,919	7,703	7,353
39 University of Houston .....	23,058	25,305	23,320	8,027	11,629	10,821	9,353	2,754
40 University of Colorado .....	22,942	22,714	21,550	20,660	13,650	14,160	13,920	13,704
Total, 1st 40 insts. ....	2,035,176	2,020,670	1,941,102	1,783,410	1,274,556	1,243,697	1,184,116	1,098,935
41 Arizona State University .....	21,893	21,491	20,129	18,618	6,584	5,915	5,400	4,933
42 Northwestern University .....	21,017	20,049	19,603	17,407	13,836	11,812	10,294	10,195
43 California Inst of Tech .....	20,384	19,203	17,931	17,363	18,084	16,783	15,677	15,186
44 University of Arizona .....	20,093	19,539	18,080	13,844	9,223	8,840	7,394	6,666
45 University of Cincinnati .....	19,746	19,056	15,961	14,150	11,822	11,152	7,903	6,903
46 University of Virginia .....	19,700	18,988	17,748	18,116	12,607	11,675	10,565	9,776
47 Auburn University .....	19,690	18,156	22,182	18,819	7,310	6,366	6,646	5,017
48 Rutgers the State U NJ .....	18,932	24,726	24,591	21,694	6,365	7,836	6,863	4,262
49 University of Washington .....	18,451	18,352	20,497	16,985	10,043	10,061	12,912	11,359
50 Michigan State University .....	18,114	16,382	15,340	14,650	8,440	5,618	5,211	4,922
Total, 1st 50 insts. ....	2,233,196	2,216,612	2,133,164	1,955,056	1,378,870	1,339,755	1,272,981	1,178,154

See explanatory information and SOURCE at end of table.

**Table B-47. Total and federally financed R&D expenditures in engineering at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
51 Woods Hole Oceanographic Inst ..	16,999	13,129	12,165 i	11,343	15,848	12,444	10,461 i	9,714
52 NM Inst Mining & Tech .....	16,757	16,797	16,445 i	16,090	3,191	4,488	3,503 i	2,519
53 University of Kentucky .....	16,729	16,601	14,610	12,172	6,607	6,188	3,858	2,821
54 University of Utah .....	16,679	14,501	15,116	16,502	10,830	8,315	9,070	7,872
55 Oklahoma State University ..	16,433	14,335	13,203	15,639	8,713	4,524	6,027	6,931
56 University of Delaware .....	16,231	12,198	12,528	12,251	8,472	4,286	4,561	4,305
57 Colorado State University .....	16,137	15,636	16,406	16,026	8,800	8,461	11,117	11,768
58 Mississippi State U .....	15,993	18,116	15,360	12,433	11,256	13,499	10,243	8,199
59 U CA Davis .....	15,487	12,364	9,634	7,794	7,728	6,447	5,293	4,149
60 U of Iowa .....	15,181	12,214	10,805	9,707	7,073	5,402	4,102	4,412
Total, 1st 60 insts. ....	2,395,822	2,362,503	2,269,436	2,085,013	1,467,388	1,413,809	1,341,216	1,240,844
61 U of Alabama Huntsville .....	15,097	13,206	12,781	11,918	10,578	9,255	9,175	8,108
62 U of Pennsylvania .....	14,934	14,469	10,620	10,832	10,471	9,895	6,960	6,685
63 Columbia U Main Division .....	14,743	17,526	16,785	17,647	12,251	13,873	10,828	11,777
64 University of Oklahoma .....	14,512	13,866	11,712	8,735	4,556	3,857	3,076	2,009
65 U CA San Diego .....	13,738	6,173	5,624	7,454	10,920	3,960	3,140	5,304
66 U of Missouri Rolla .....	13,706	11,465	10,286	9,207	4,438	3,199	3,197	2,774
67 Stevens Institute Tech .....	13,367	13,791	7,469	5,226	9,978	4,937	2,600	2,217
68 Drexel University .....	13,027	13,978	12,506	12,835	7,706	6,445	4,957	4,005
69 U of Missouri Columbia .....	12,362	10,702	9,937	10,125	2,751	2,667	2,167	1,624
70 Michigan Tech University .....	11,940 i	11,827	12,326	10,366	5,422 i	4,568	3,855	3,490
Total, 1st 70 insts. ....	2,533,248	2,489,506	2,379,482	2,189,358	1,546,459	1,476,465	1,391,171	1,288,837
71 Mercer University .....	11,784	9,157	7,184	4,154	9,579	6,835	6,261	3,259
72 U of Nebraska Lincoln .....	11,263	12,141	12,377	9,709	1,603	1,386	1,450	1,337
73 West Virginia University .....	11,184	9,812	7,005	5,381	7,146	6,194	3,492	3,264
74 University North Dakota .....	10,768	10,011	8,361	8,271	9,371	9,090	7,740	6,793
75 U of South Florida .....	10,726	12,458	16,945	24,961	2,987	4,163	10,343	18,910
76 Colorado School of Mines .....	10,588	8,320	8,648	6,097	5,095	3,777	4,227	2,576
77 Syracuse University .....	9,938	5,325	5,255	7,560	4,367	1,667	1,563	3,738
78 Texas Tech University .....	9,927	8,806	8,902	8,801	2,341	2,325	2,419	2,668
79 Oregon State University .....	9,801	9,169	8,226	8,459	3,634	4,411	4,263	5,445
80 U MA Amherst .....	9,629	10,479	--	--	4,760	5,603	--	--
Total, 1st 80 insts. ....	2,638,856	2,585,184	2,462,385	2,272,751	1,597,342	1,521,916	1,432,929	1,336,827
81 U of South Carolina .....	9,314	10,161	14,260	6,974	4,370	4,805	4,297	2,308
82 U TX Arlington .....	9,262	8,285	8,240	2,849	2,236	1,571	1,355	563
83 KS St U Agri & App Sci .....	9,091	8,397	6,635	6,186	2,382	2,517	1,615	1,921
84 Brown University .....	9,073	9,707	9,936	7,156	6,532	7,304	7,144	5,704
85 Ohio University .....	8,767	8,294	6,678	5,766	3,052	3,135	2,519	2,332
86 Washington State U .....	8,762	7,623	6,792	6,025	4,391	3,732	2,774	2,037
87 University of Pittsburgh .....	8,740	8,247	6,514	5,944	5,349	4,132	3,179	2,967
88 U Arkansas Fayetteville .....	8,733	7,981	5,710	7,059	1,941	2,105	2,457	2,193
89 U CA Irvine .....	8,655	6,101	5,171	4,568	3,662	3,006	2,752	2,608
90 Vanderbilt University .....	8,591	8,309	8,554	7,287	6,813	6,110	5,908	5,018
Total, 1st 90 insts. ....	2,727,844	2,668,289	2,540,875	2,332,565	1,638,070	1,560,333	1,466,929	1,364,478
91 Duke University .....	8,515	7,515	6,512	6,492	6,209	5,693	4,948	4,899
92 George Mason University .....	8,239	5,119	4,031	3,550	4,749	3,278	2,035	1,224
93 University of IL Chicago .....	8,056	8,795	7,940	5,486	2,596	2,318	2,566	2,335
94 Tennessee Tech U .....	8,028	8,372	8,242	7,832	709	920	324	644
95 Clarkson University .....	7,611	6,345	6,370	5,381	3,963	2,645	2,492	2,147
96 NJ Inst of Technology .....	7,429	5,215	6,614	4,510	3,097	1,151	1,624	928
97 The University of Alabama .....	7,422	7,707	5,996	6,709	3,508	3,197	1,970	2,871
98 NC A&T State University .....	7,351	6,720	5,753	4,355	4,889	4,154	4,049	3,644
99 US Naval Postgrad School ..	7,232	6,232	6,599	5,575	7,143	6,175	6,504	5,575
100 Yale University .....	7,200	7,700	7,329	6,732	5,805	5,076	4,603	4,652
Total, 1st 100 insts. ....	2,804,927	2,738,009	2,606,261	2,389,187	1,680,738	1,594,940	1,498,044	1,393,397
Total, all other sampled insts. ....	346,371	321,677	296,253	267,140	177,478	157,209	139,733	132,299

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-48. R&D expenditures in engineering subfields  
at universities and colleges: fiscal year 1993**

[Dollars in thousands]

Page 1 of 2

Institution and ranking	Total	Aero/ astro- nautical	Chemical	Civil	Elec- trical	Mechan- ical	Metal- lurgical and materials	Other
Total, all institutions .....	3,151,298	206,218	269,220	367,091	696,243	480,294	302,049	830,183
1 Johns Hopkins U .....	203,064	20,629	4,663	3,400	62,010	41,640	665	70,057
2 MA Institute of Tech .....	155,174	17,876	12,747	13,825	53,073	17,793	14,607	25,253
3 Pennsylvania State U .....	118,454	1,246	2,853	4,318	4,019	11,857	18,067	76,094
4 Georgia Institute of Tech .....	115,523	16,082	3,469	4,293	53,714	14,212	9,658	14,095
5 U TX Austin .....	99,240	6,279	7,475	18,637	9,543	18,114	2,566	36,626
6 Stanford University .....	90,770	5,228	3,022	5,839	30,930	9,065	2,420	34,266
7 Texas A&M University .....	77,413	3,898	10,963	21,773	5,325	9,530	2,878	23,046
8 University of Michigan .....	74,735	2,856	3,271	7,528	31,239	11,164	5,370	13,307
9 U CA Berkeley .....	62,019	0	2,118	15,642	28,492	4,816	2,846	8,105
10 University of IL Urbana .....	53,304	2,077	1,964	7,833	10,181	9,100	17,716	4,433
Total, 1st 10 insts. ....	1,049,696	76,171	52,545	103,088	288,526	147,291	76,793	305,282
11 U WI Madison .....	49,723	0	5,676	2,035	9,125	2,796	3,615	26,476
12 U MD College Park .....	48,698	5,044	595	2,851	7,850	5,844	3,800	22,714
13 NC State U Raleigh .....	48,244	0	4,870	5,141	10,567	5,695	13,088	8,883
14 University of Rochester .....	46,716	0	708	0	2,728	36,587	0	6,693
15 VA Polytech Inst & St U .....	45,671	2,666	1,817	4,365	8,770	10,164	4,648	13,241
16 New Mexico State U .....	45,450	21,697	3,618	1,772	12,474	3,016	1,624	1,249
17 Ohio State University .....	44,967	1,588	1,088	1,214	4,867	3,877	3,859	28,474
18 Cornell University .....	43,369	4,289	3,481	3,368	12,154	1,008	3,936	15,133
19 Purdue University .....	40,454	2,149	2,972	4,727	7,200	7,798	4,023	11,585
20 University of Dayton .....	40,390	10,520	3,450	65	3,163	13,088	7,204	2,900
Total, 1st 20 insts. ....	1,503,378	124,124	80,820	128,626	367,424	237,164	122,590	442,630
21 Iowa St U of Sci & Tech .....	35,955	1,056	1,546	6,353	3,927	3,132	1,300	18,641
22 Rensselaer Polytech Inst .....	31,787	0	2,286	4,713	7,994	8,356	4,056	4,382
23 University of New Mexico .....	30,509	0	2,112	15,874	4,019	800	7,405	299
24 U of Tennessee System .....	30,248	3,401	9,515	6,236	2,020	1,056	2,020	6,000
25 University of Florida .....	28,912	1,752	1,742	6,204	3,705	2,815	4,469	8,225
26 University of Minnesota .....	28,856	1,837	10,059	6,357	3,982	5,015	0	1,606
27 U CA Los Angeles .....	27,799	0	1,667	2,476	10,598	10,201	2,323	534
28 U of Southern California .....	27,576	2,359	185	1,740	14,425	280	1,576	7,011
29 Carnegie Mellon U .....	26,178	0	1,403	1,313	11,218	1,973	3,767	6,504
30 Case Western Reserve U .....	24,957	0	10,503	498	3,656	2,938	4,035	3,327
Total, 1st 30 insts. ....	1,796,155	134,529	121,838	180,390	432,968	273,730	153,541	499,159
31 Princeton University .....	24,916	8,005	4,190	3,562	8,046	0	914	199
32 Clemson University .....	24,798	0	1,859	5,143	3,278	3,016	0	11,502
33 University of Connecticut .....	24,452	0	471	4,376	2,555	1,131	14,807	1,112
34 Louisiana State U System .....	24,145	0	3,514	2,616	1,784	1,018	7,277	7,936
35 Utah State University .....	24,093	0	0	1,848	19,442	1,079	0	1,724
36 U CA Santa Barbara .....	23,798	0	3,707	0	10,151	2,001	7,632	307
37 SUNY Buffalo .....	23,732	0	1,251	10,763	2,752	7,011	0	1,955
38 Lehigh University .....	23,087	0	3,153	6,269	2,729	4,377	5,080	1,479
39 University of Houston .....	23,058	7,360	3,669	1,265	1,202	3,870	5,480	212
40 University of Colorado .....	22,942	6,717	2,253	3,735	8,603	1,154	408	72
Total, 1st 40 insts. ....	2,035,176	156,611	145,905	219,967	493,510	298,387	195,139	525,657
41 Arizona State University .....	21,893	280	2,261	2,457	8,672	4,768	0	3,455
42 Northwestern University .....	21,017	0	1,812	2,233	1,928	1,462	4,336	9,246
43 California Inst of Tech .....	20,384	3,212	2,682	831	2,080	1,192	717	9,670
44 University of Arizona .....	20,093	1,968	790	4,834	4,802	0	3,342	4,357
45 University of Cincinnati .....	19,746	1,848	1,332	9,308	2,735	1,584	2,939	0
46 University of Virginia .....	19,700	1,301	1,311	1,519	2,624	3,806	5,806	3,333
47 Auburn University .....	19,690	6,644	3,100	3,136	1,669	2,386	1,378	1,377
48 Rutgers the State U NJ .....	18,932	229	2,344	286	2,682	2,198	9,185	2,008
49 University of Washington .....	18,451	2,174	2,137	5,064	4,238	1,780	718	2,340
50 Michigan State University .....	18,114	0	11	0	0	0	1	18,102
Total, 1st 50 insts. ....	2,233,196	174,267	163,685	249,635	524,940	317,563	223,561	579,545

See explanatory information and SOURCE at end of table.

**Table B-48. R&D expenditures in engineering subfields  
at universities and colleges: fiscal year 1993**

[Dollars in thousands]

Page 2 of 2

Institution and ranking	Total	Aero/ astro- nautical	Chemical	Civil	Elec- trical	Mechan- ical	Metal- lurgical and materials	Other
51 Woods Hole Oceanographic Inst ..	16,999	1,214 i	1,303 i	1,336 i	4,362 i	3,413 i	0 i	5,371 i
52 NM Inst Mining & Tech .....	16,757	0	3,991	0	57	0	1,300	11,409
53 University of Kentucky .....	16,729	0	484	191	317	1,249	0	14,488
54 University of Utah .....	16,679	0	3,191	272	994	3,336	3,594	5,292
55 Oklahoma State University ..	16,433	248	4,974	2,174	1,465	2,258	0	5,314
56 University of Delaware .....	16,231	0	4,391	2,054	2,052	631	6,663	440
57 Colorado State University ....	16,137	0	2,638	6,319	2,494	3,217	523	946
58 Mississippi State U .....	15,993	1,660	1,120	207	630	353	0	12,023
59 U CA Davis .....	15,487	0	441	4,390	3,472	4,519	0	2,665
60 U of Iowa .....	15,181	0	1,045	4,767	1,117	6,991	0	1,261
Total, 1st 60 insts. ....	2,395,822	177,389	187,263	271,345	541,900	343,530	235,641	638,754
61 U of Alabama Huntsville .....	15,097	0	2,037	66	2,498	7,071	102	3,323
62 U of Pennsylvania .....	14,934	0	1,101	1,070	1,788	1,311	6,090	3,574
63 Columbia U Main Division ....	14,743	0	3,489	258	6,331	612	741	3,312
64 University of Oklahoma .....	14,512	0	7,359	3,117	1,773	1,216	0	1,047
65 U CA San Diego .....	13,738	0	0	44	0	5,382	0	8,312
66 U of Missouri Rolla .....	13,706	30	449	875	757	2,069	7,810	1,716
67 Stevens Institute Tech .....	13,367	0	972	591	652	8,555	620	1,977
68 Drexel University .....	13,027	0	742	1,610	3,771	1,980	2,151	2,773
69 U of Missouri Columbia .....	12,362	0	723	1,446	679	1,202	0	8,312
70 Michigan Tech University .....	11,940 i	0 i	1,842 i	1,886 i	522 i	2,842 i	3,346 i	1,502 i
Total, 1st 70 insts. ....	2,533,248	177,419	205,977	282,308	560,671	375,770	256,501	674,602
71 Mercer University .....	11,784	1,979	0	0	2,329	4,920	0	2,556
72 U of Nebraska Lincoln .....	11,263	0	427	3,893	3,137	896	37	2,873
73 West Virginia University .....	11,184	0	142	2,232	1,047	4,797	994	1,972
74 University North Dakota .....	10,768	0	23	30	31	6	12	10,666
75 U of South Florida .....	10,726	0	212	5,054	4,862	315	0	283
76 Colorado School of Mines ....	10,588	0	2,519	0	0	0	7,573	496
77 Syracuse University .....	9,938	95	1,597	665	1,324	418	139	5,700
78 Texas Tech University .....	9,927	0	1,118	1,964	2,188	956	2,528	1,173
79 Oregon State University .....	9,801	0	641	2,019	1,472	1,649	0	4,020
80 U MA Amherst .....	9,629	0	1,631	1,114	3,926	1,698	0	1,260
Total, 1st 80 insts. ....	2,638,856	179,493	214,287	299,279	580,987	391,425	267,784	705,601
81 U of South Carolina .....	9,314	0	1,350	556	1,703	4,921	0	784
82 U TX Arlington .....	9,262	114	0	290	3,752	821	0	4,285
83 KS St U Agri & App Sci .....	9,091	0	521	734	593	614	0	6,629
84 Brown University .....	9,073	648 i	665 i	703 i	2,215 i	2,004 i	0 i	2,838 i
85 Ohio University .....	8,767	0	2,098	984	4,447	647	0	591
86 Washington State U .....	8,762	0	566	1,974	2,396	1,744	336	1,746
87 University of Pittsburgh .....	8,740	0	2,553	1,030	890	500	2,321	1,446
88 U Arkansas Fayetteville .....	8,733	0	1,468	1,504	1,760	597	0	3,404
89 U CA Irvine .....	8,655	0	0	2,946	1,534	3,032	0	1,143
90 Vanderbilt University .....	8,591	0	521	1,514	2,824	796	2,293	643
Total, 1st 90 insts. ....	2,727,844	180,255	224,029	311,514	603,101	407,101	272,734	729,110
91 Duke University .....	8,515	0	0	830	1,192	1,700	0	4,793
92 George Mason University ....	8,239	0	0	0	1,312	0	0	6,927
93 University of IL Chicago .....	8,056	0	631	1,293	4,148	1,705	0	279
94 Tennessee Tech U .....	8,028	0	26	3,118	2,110	2,551	0	223
95 Clarkson University .....	7,611	0	3,704	1,523	794	1,590	0	0
96 NJ Inst of Technology .....	7,429	0	2,088	1,817	1,907	1,226	0	391
97 The University of Alabama ....	7,422	715	1,883	420	595	1,200	1,071	1,538
98 NC A&T State University .....	7,351	0	407	312	1,560	3,111	0	1,961
99 US Naval Postgrad School ..	7,232	2,673	0	0	2,706	1,692	161	0
100 Yale University .....	7,200	0	1,708	0	1,739	2,315	0	1,438
Total, 1st 100 insts. ....	2,804,927	183,643	234,476	320,827	621,164	424,191	273,966	746,660
Total, all other sampled insts. ....	346,371	22,575	34,744	46,264	75,079	56,103	28,083	83,523

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-49. Federally financed R&D expenditures in engineering subfields at universities and colleges: fiscal year 1993**

[Dollars in thousands]

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Institution and ranking	Total	Aero/ astro- nautical	Chemical	Civil	Elec- trical	Mechan- ical	Metal- lurgical and materials	Other
Total, all institutions .....	1,858,216	158,871	140,929	152,354	458,102	309,956	152,417	485,587
1 Johns Hopkins U .....	198,765	19,805	4,373	2,172	61,562	40,994	516	69,343
2 MA Institute of Tech .....	107,423	14,239	8,510	10,601	41,129	9,369	9,218	14,357
3 Pennsylvania State U .....	79,610	822	1,388	1,162	2,496	6,238	8,432	59,072
4 Stanford University .....	78,061	4,793	2,456	4,914	25,377	7,799	1,346	31,376
5 Georgia Institute of Tech .....	64,634	8,998	1,941	2,402	30,052	7,951	5,404	7,886
6 U TX Austin .....	55,324	4,878	3,395	2,474	3,773	14,084	1,384	25,336
7 University of Michigan .....	44,668	1,503	1,528	4,422	21,289	5,805	3,634	6,487
8 University of Rochester .....	42,751	0	366	0	2,068	35,036	0	5,281
9 New Mexico State U .....	38,316	19,660	3,160	1,184	9,220	2,671	1,472	949
10 University of Dayton .....	34,658	10,118	3,241	49	2,842	9,681	6,259	2,468
Total, 1st 10 insts. ....	744,210	84,816	30,358	29,380	199,808	139,628	37,665	222,555
11 U CA Berkeley .....	31,539	0	837	3,629	18,326	3,317	1,639	3,791
12 U WI Madison .....	31,278	0	3,145	734	5,963	1,228	2,478	17,730
13 University of IL Urbana .....	30,388	1,282	1,162	3,950	7,844	3,927	9,657	2,566
14 Cornell University .....	28,923	2,705	2,011	1,451	7,916	818	3,225	10,797
15 Purdue University .....	23,700	1,529	1,537	1,924	4,850	4,204	3,644	6,012
16 VA Polytech Inst & St U .....	23,698	2,089	575	1,238	3,676	5,278	1,941	8,901
17 U of Southern California .....	22,262	2,106	140	681	12,471	201	1,395	5,268
18 NC State U Raleigh .....	21,715	0	1,547	1,807	5,045	3,698	6,788	2,830
19 U MD College Park .....	21,463	2,680	10	1,082	3,425	2,455	1,712	10,099
20 Utah State University .....	20,185	0	0	817	17,884	594	0	890
Total, 1st 20 insts. ....	999,361	97,207	41,322	46,693	287,208	165,348	70,144	291,439
21 U CA Los Angeles .....	20,057	0	1,009	797	7,580	8,938	1,733	0
22 U CA Santa Barbara .....	19,349	0	2,739	0	8,258	1,845	6,311	196
23 Texas A&M University .....	19,249	2,527	1,946	2,230	1,381	1,820	31	9,314
24 California Inst of Tech .....	18,084	3,188	1,873	702	1,808	1,020	608	8,885
25 University of New Mexico .....	17,595	0	1,383	9,902	1,595	313	4,395	7
26 Case Western Reserve U .....	16,223	0	6,189	200	2,273	2,494	2,886	2,181
27 Rensselaer Polytech Inst .....	15,924	0	1,145	2,361	4,005	4,186	2,032	2,195
28 Woods Hole Oceanogrphc Inst .....	15,848	1,133	1,235	1,249	4,136	3,070	0	5,025
29 U of Tennessee System .....	15,796	589	7,478	2,518	1,187	376	733	2,915
30 University of Minnesota .....	15,735	1,386	7,256	1,708	2,739	2,417	0	229
Total, 1st 30 insts. ....	1,173,221	106,030	73,575	68,360	322,170	191,827	88,873	322,386
31 Iowa St U of Sci & Tech .....	15,469	742	587	2,557	1,149	1,313	740	8,381
32 Ohio State University .....	15,251	988	636	510	3,017	2,622	1,569	5,909
33 Carnegie Mellon U .....	14,920	0	969	968	5,424	1,359	2,227	3,973
34 Northwestern University .....	13,836	0	1,300	1,540	1,590	690	3,322	5,394
35 University of Colorado .....	13,650	4,770	1,185	2,172	4,653	742	62	66
36 Princeton University .....	12,964	5,800	1,457	2,174	3,260	0	235	38
37 University of Florida .....	12,802	941	968	893	1,602	1,913	2,854	3,631
38 University of Virginia .....	12,607	1,164	911	1,169	1,627	1,965	4,307	1,464
39 Columbia U Main Division .....	12,251	0	1,754	258	5,931	470	717	3,121
40 Lehigh University .....	12,109	0	588	4,472	1,796	2,117	2,856	280
Total, 1st 40 insts. ....	1,309,080	120,435	83,930	85,073	352,219	205,018	107,762	354,643
41 University of Cincinnati .....	11,822	1,414	476	6,342	1,680	522	1,388	0
42 University of Houston .....	11,629	5,689	1,675	680	456	2,862	261	6
43 Mississippi State U .....	11,256	243	834	79	449	286	0	9,365
44 U CA San Diego .....	10,920	0	0	7	0	4,286	0	6,627
45 University of Utah .....	10,830	0	1,385	221	640	2,629	2,683	3,272
46 U of Alabama Huntsville .....	10,578	0	1,852	47	1,685	4,740	47	2,207
47 U of Pennsylvania .....	10,471	0	737	138	980	808	4,234	3,574
48 University of Washington .....	10,043	1,607	922	2,333	2,250	1,475	367	1,089
49 Stevens Institute Tech .....	9,978	0	550	92	377	7,905	194	860
50 Mercer University .....	9,579	1,672	0	0	1,965	4,152	0	1,790
Total, 1st 50 insts. ....	1,416,186	131,060	92,361	95,012	362,701	234,683	116,936	383,433

See explanatory information and SOURCE at end of table.



**Table B-49. Federally financed R&D expenditures in engineering subfields  
at universities and colleges: fiscal year 1993**

[Dollars in thousands]

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Institution and ranking	Total	Aero/ astro- nautical	Chemical	Civil	Elec- trical	Mechan- ical	Metal- lurgical and materials	Other
51 University North Dakota .....	9,371	0	0	30	31	1	0	9,309
52 SUNY Buffalo .....	9,223	0	616	6,527	816	1,005	0	259
53 University of Arizona .....	9,223	1,356	363	3,375	733	0	1,679	1,717
54 Colorado State University .....	8,800	0	1,778	3,081	1,182	1,727	447	585
55 Oklahoma State University ..	8,713	32	4,337	121	623	438	0	3,162
56 University of Delaware .....	8,472	0	1,634	955	1,447	76	4,213	147
57 Michigan State University ....	8,440	0	5	0	0	0	0	8,435
58 U CA Davis .....	7,728	0	286	1,119	2,164	2,136	0	2,023
59 Drexel University .....	7,706	0	328	535	2,384	1,406	1,010	2,043
60 Clemson University .....	7,354	0	551	1,525	972	894	0	3,412
Total, 1st 60 insts. ....	1,501,216	132,448	102,259	112,280	373,053	242,366	124,285	414,525
61 Auburn University .....	7,310	4,807	531	789	401	722	7	53
62 West Virginia University .....	7,146	0	88	1,218	613	3,399	528	1,300
63 US Naval Postgrad School ..	7,143	2,659	0	0	2,677	1,692	115	0
64 U of Iowa .....	7,073	0	352	1,522	719	4,098	0	382
65 Vanderbilt University .....	6,813	0	204	1,036	2,205	586	2,175	607
66 University of Kentucky .....	6,607	0	384	136	202	966	0	4,919
67 Arizona State University .....	6,584	0	963	620	2,502	1,943	0	556
68 Louisiana State U System ....	6,548	0	1,674	990	399	352	1,345	1,788
69 Brown University .....	6,532	468 i	503 i	517 i	1,711 i	1,266 i	0 i	2,067 i
70 Rutgers the State U NJ .....	6,365	200	905	230	1,191	1,394	1,981	464
Total, 1st 70 insts. ....	1,569,337	140,582	107,863	119,338	385,673	258,784	130,436	426,661
71 Duke University .....	6,209	0	0	578	469	1,349	0	3,813
72 Yale University .....	5,805	0	1,461	0	1,304	2,038	0	1,002
73 George Washington U .....	5,716	2,267	0	0	1,182	86	76	2,105
74 Boston University .....	5,565	659	0	0	1,120	173	296	3,317
75 Michigan Tech University ....	5,422 i	0 i	367 i	999 i	257 i	1,925 i	1,218 i	656 i
76 University of Pittsburgh .....	5,349	0	1,939	552	784	310	1,515	249
77 Colorado School of Mines ....	5,095	0	1,496	0	0	0	3,265	334
78 Northeastern University .....	5,014	0	495	177	4,088	203	0	51
79 NC A&T State University .....	4,889	0	236	170	1,219	1,884	0	1,380
80 Florida International U .....	4,878	0	0	521	671	3,686	0	0
Total, 1st 80 insts. ....	1,623,279	143,508	113,857	122,335	396,767	270,438	136,806	439,568
81 U MA Amherst .....	4,760	0	900	210	2,771	716	0	163
82 George Mason University .....	4,749	0	0	0	703	0	0	4,046
83 Polytechnic University .....	4,728 i	57 i	205 i	68 i	3,656 i	114 i	513 i	115 i
84 Dartmouth College .....	4,700	337 i	361 i	370 i	1,230 i	911 i	0 i	1,491 i
85 University of Oklahoma .....	4,556	0	2,794	764	403	285	0	310
86 Brigham Young University ...	4,441	0	2,904	543	634	198	0	162
87 U of Missouri Rolla .....	4,438	27	141	288	225	757	2,459	541
88 Washington State U .....	4,391	0	281	867	1,274	1,201	88	680
89 U of South Carolina .....	4,370	0	645	289	1,017	2,224	0	195
90 Syracuse University .....	4,367	69	679	203	639	220	0	2,557
Total, 1st 90 insts. ....	1,668,779	143,998	122,767	125,937	409,319	277,064	139,866	449,828
91 U of Nevada Reno .....	4,329	61	0	1,691	118	1,593	866	0
92 Harvard University .....	4,054	292 i	306 i	304 i	1,064 i	790 i	0 i	1,298 i
93 Clarkson University .....	3,963	0	2,205	586	245	927	0	0
94 Florida Atlantic U .....	3,746	0	0	0	1,769	263	0	1,714
95 CUNY City College .....	3,713	0	555	1,139	804	1,068	0	147
96 U CA Irvine .....	3,662	0	0	529	725	2,144	0	264
97 Oregon State University .....	3,634	0	377	1,134	673	653	0	797
98 Old Dominion University .....	3,624	697	0	414	859	1,423	0	231
99 The University of Alabama ....	3,508	335	1,330	195	161	236	605	646
100 University of Connecticut ....	3,348	0	124	142	998	414	1,670	0
Total, 1st 100 insts. ....	1,706,360	145,383	127,664	132,071	416,735	286,575	143,007	454,925
Total, all other sampled insts. ....	151,856	13,488	13,265	20,283	41,367	23,381	9,410	30,662

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-50. R&D expenditures in the physical sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Physical sciences total				1993 subfields			
	1993	1992	1991	1990	Astronomy	Chemistry	Physics	Other
Total, all institutions .....	2,124,377	2,051,443	1,938,525	1,806,100	251,878	735,633	928,334	208,532
1 Johns Hopkins U .....	116,033	130,059	118,842	93,344	21,816	5,227	78,624	10,366
2 MA Institute of Tech .....	101,256	95,935	101,286	98,119	13,678	14,670	72,908	0
3 University of Arizona .....	65,920	59,235	64,837	61,723	43,910	6,119	15,891	0
4 U MD College Park .....	65,431	66,810	69,447	56,256	8,107	11,449	27,568	18,307
5 U TX Austin .....	64,258	58,507	59,024	40,985	9,667	16,769	17,316	20,506
6 U CA Berkeley .....	63,693	61,408	55,736	50,711	11,998	13,566	38,129	0
7 California Inst of Tech .....	51,180	47,840	47,728	42,034	10,910	13,476	26,794	0
8 Stanford University .....	46,532	75,680	58,550	54,078	0	10,551	3,853	32,128
9 Cornell University .....	44,976	44,587	45,572	44,887	5,810	10,091	26,521	2,554
10 U CA San Diego .....	43,430	44,711	41,115	30,989	21,726	7,632	11,811	2,261
Total, 1st 10 insts. ....	662,709	684,772	662,137	573,126	147,622	109,550	319,415	86,122
11 University of IL Urbana .....	40,517	39,935	39,511	37,646	1,799	10,864	11,364	16,490
12 Florida State University .....	38,281	23,119	22,454	25,017	0	4,341	9,143	24,797
13 U WI Madison .....	36,719	35,224	32,841	29,538	5,021	10,383	15,299	6,016
14 University of Michigan .....	30,577	23,872	21,419	15,329	688	9,518	19,166	1,205
15 Indiana University .....	29,225	29,730	24,147	22,532	380	9,476	19,369	0
16 University of Colorado .....	28,968	24,521	23,171	21,438	10,903	7,820	10,170	75
17 University of Chicago .....	28,792	27,867	25,171	26,088	6,198	4,247	0	18,347
18 Harvard University .....	28,041	27,740	25,868	28,340	4,606	13,442	9,990	3
19 Michigan State University .....	27,577	23,511	22,015	20,898	0	6,409	21,168	0
20 U CA Los Angeles .....	24,577	25,369	22,407	23,136	1,511	12,136	10,930	0
Total, 1st 20 insts. ....	975,983	965,660	921,141	823,088	178,728	198,186	446,014	153,055
21 Princeton University .....	24,518	25,628	23,478	22,819	4,052	7,927	12,539	0
22 University Hawaii Manoa .....	22,267	22,477	19,762	17,953	17,612	1,724	2,931	0
23 SUNY Stony Brook .....	22,141	20,580	21,466	20,878	1,284	4,880	15,620	357
24 Pennsylvania State U .....	20,733	18,737	16,158	16,625	3,010	12,056	4,765	902
25 Yale University .....	19,473	19,707	18,737	15,391	1,333	8,186	9,860	94
26 Rutgers the State U NJ .....	19,062	20,500	18,379	17,273	0	7,706	11,356	0
27 U of Pennsylvania .....	19,047	18,434	18,260	15,494	225	10,556	8,266	0
28 University of Houston .....	18,860	8,291	7,944	19,290	0	15,420	3,440	0
29 Ohio State University .....	18,645	16,772	14,618	13,142	776	9,768	8,101	0
30 University of Washington .....	18,591	17,623	15,182	15,333	2,324	7,034	9,233	0
Total, 1st 30 insts. ....	1,179,320	1,154,409	1,095,125	997,286	209,344	283,443	532,125	154,408
31 Columbia U Main Division .....	18,125	16,152	16,929	16,361	2,747	7,377	1,869	6,132
32 Texas A&M University .....	18,015	16,905	17,230	17,538	0	8,599	7,505	1,911
33 U CA Santa Cruz .....	17,800	16,209	14,582	12,887	10,005	2,765	3,629	1,401
34 Arizona State University .....	16,914	15,546	15,308	14,490	258	7,726	4,784	4,146
35 U of Iowa .....	16,855	20,949	18,778	17,498	1,348	2,959	12,131	417
36 University of Minnesota .....	16,735	16,190	18,143	16,577	1,221	6,851	8,450	213
37 Purdue University .....	16,730	15,814	15,134	14,467	0	8,913	7,817	0
38 U CA Santa Barbara .....	16,588	15,649	15,069	15,216	0	3,646	10,906	2,036
39 Georgia Institute of Tech .....	15,761	18,392	14,422	15,314	896	6,661	8,204	0
40 U CA Irvine .....	15,236	14,095	13,043	12,300	18	5,675	8,323	1,220
Total, 1st 40 insts. ....	1,348,079	1,320,310	1,253,763	1,149,934	225,837	344,615	605,743	171,884
41 U MA Amherst .....	15,077	16,122	--	--	0	8,795	5,123	1,159
42 University of Rochester .....	14,313	13,472	12,045	13,329	1,232	6,924	6,157	0
43 U of Alaska Fairbanks .....	14,134	13,380	12,818	13,761	4,631	1,040	8,021	442
44 University of Virginia .....	13,536	12,510	11,476	11,212	1,258	5,555	6,723	0
45 University of Notre Dame .....	13,364	11,706	10,306	10,735	0	8,831	4,533	0
46 U of Tennessee System .....	13,109	11,957	11,398	10,736	0	4,823	8,286	0
47 Duke University .....	12,286	11,358	10,690	9,085	0	3,694	8,592	0
48 University of Florida .....	12,243	10,860	10,246	11,804	725	7,106	4,411	1
49 University of Pittsburgh .....	12,159	11,932	10,852	12,904	645	6,123	4,582	809
50 University of Oregon .....	12,097	11,531	11,004	12,114	0	6,096	6,001	0
Total, 1st 50 insts. ....	1,480,397	1,445,138	1,354,598	1,255,614	234,328	403,602	668,172	174,295

See explanatory information and SOURCE at end of table.

**Table B-50. R&D expenditures in the physical sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Physical sciences total				1993 subfields			
	1993	1992	1991	1990	Astronomy	Chemistry	Physics	Other
51 Northwestern University .....	11,949	11,692	11,847	11,770	0	7,975	3,962	12
52 Boston University .....	10,463	10,394	9,359	8,956	851	1,168	7,904	540
53 U of Alabama Huntsville .....	10,433	11,444	9,171	11,024	0	5,252	5,181	0
54 Louisiana State U System .....	10,377	10,795	9,912	9,164	0	4,260	5,466	651
55 VA Polytech Inst & St U .....	9,249	9,403	9,562	9,710	0	6,991	2,258	0
56 U of NC Chapel Hill .....	9,246	7,992	6,965	6,481	0	7,270	1,976	0
57 University of Utah .....	9,163	11,180	8,859	8,115	0	5,773	3,390	0
58 U CA Davis .....	8,859	8,670	7,471	7,851	0	3,355	5,504	0
59 Rice University .....	8,853	9,191	9,274	8,470	2,790	3,491	2,572	0
60 University of Delaware .....	8,787	7,906	7,996	6,869	0	4,053	1,393	3,341
Total, 1st 60 insts. ....	1,577,776	1,543,805	1,445,014	1,344,024	237,969	453,190	707,778	178,839
61 NC State U Raleigh .....	8,785	6,951	7,091	5,611	0	2,269	5,635	881
62 University of Akron .....	8,770	7,289	6,357	4,748	0	2,801	136	5,833
63 Wayne State University .....	8,517	10,917	8,896	7,900	0	4,807	3,710	0
64 Colorado State University .....	8,372	6,320	5,220	4,658	0	5,211	1,230	1,931
65 Brown University .....	8,330	7,964	6,907	6,162	0	3,781	4,549	0
66 University of IL Chicago .....	8,207	7,605	6,783	8,204	0	3,668	4,539	0
67 Kent State University .....	8,136	8,320	4,681	3,375	0	486	1,412	6,238
68 U of Central Florida .....	8,073	7,909	10,765	7,693	7,450	501	122	0
69 U of Southern California .....	7,843	8,200	7,349	7,463	103	6,122	1,618	0
70 University of Georgia .....	7,831	7,501	8,061	6,706	0	5,331	2,500	0
Total, 1st 70 insts. ....	1,660,640	1,622,781	1,517,124	1,406,544	245,522	488,167	733,229	193,722
71 Vanderbilt University .....	7,777	6,663	6,646	6,681	0	1,989	5,788	0
72 Washington University .....	7,765	7,136	6,217	6,554	0	3,899	3,866	0
73 Oklahoma State University ..	7,702	5,834	5,102	4,837	0	1,775	4,019	1,908
74 U of Missouri Columbia .....	7,621	5,101	5,123	3,545	0	4,139	3,482	0
75 University of Oklahoma .....	7,585	6,807	5,690	5,030	0	4,922	2,663	0
76 U of Nebraska Lincoln .....	7,389	7,306	5,135	4,642	247	4,198	2,944	0
77 Carnegie Mellon U .....	7,323	6,484	6,760	7,203	0	3,016	3,614	693
78 U TX Dallas .....	7,270	7,153	5,058	5,314	0	1,410	5,860	0
79 CUNY City College .....	7,260	5,367	5,879	5,423	0	3,488	3,772	0
80 SUNY Buffalo .....	7,067	7,503	7,432	6,952	0	4,444	1,834	789
Total, 1st 80 insts. ....	1,735,399	1,688,135	1,576,166	1,462,725	245,769	521,447	771,071	197,112
81 Rensselaer Polytech Inst .....	7,007	7,162	5,256	6,097	0	4,622	2,385	0
82 U of South Carolina .....	6,346	6,390	5,282	5,710	0	4,363	1,724	259
83 Oregon Grad Inst Sci Tech ..	6,128	3,707	3,726	3,784	0	3,583	2,545	0
84 Rockefeller University .....	6,037	7,145	9,031	11,661	0	3,666	2,371	0
85 Emory University .....	6,032	6,574	5,407	4,631	0	4,576	1,456	0
86 University of Kansas .....	5,997	7,354	6,648	6,635	0	4,208	1,789	0
87 Iowa St U of Sci & Tech .....	5,944	4,623	8,475	5,396	69	3,486	2,389	0
88 Utah State University .....	5,497	6,767	5,030	4,431	0	1,276	4,221	0
89 Georgetown University .....	5,418	5,426	5,253	3,998	0	5,348	0	70
90 Case Western Reserve U ....	5,345	4,828	5,146	10,022	125	3,043	2,177	0
Total, 1st 90 insts. ....	1,795,150	1,748,111	1,635,420	1,525,090	245,963	559,618	792,128	197,441
91 U Arkansas Fayetteville .....	5,302	4,039	4,114	3,496	0	3,080	2,222	0
92 The University of Alabama .....	5,291	5,326	4,516	3,910	58	2,337	2,482	414
93 Syracuse University .....	5,255	5,378	5,169	5,968	0	2,040	3,182	33
94 U CA Riverside .....	5,164	4,178	4,299	4,044	0	3,054	2,110	0
95 Lehigh University .....	4,981	5,357	4,995	5,238	0	3,210	1,771	0
96 Catholic U of America .....	4,978	4,751	4,362	4,305	0	927	1,028	3,023
97 Clemson University .....	4,955	4,757	4,097	3,567	0	2,652	2,303	0
98 U MA Lowell .....	4,564	3,785	3,266	2,737	0	1,710	2,854	0
99 University of Mississippi .....	4,564	5,034	5,899	4,091	0	813	3,751	0
100 Washington State U .....	4,553	3,577	2,114	2,425	0	2,497	2,056	0
Total, 1st 100 insts. ....	1,844,757	1,794,293	1,678,251	1,564,871	246,021	581,938	815,887	200,911
Total, all other sampled insts. ....	279,620	257,150	260,274	241,229	5,857	153,695	112,447	7,621

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-51. Federally financed R&D expenditures in the physical sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Physical sciences total				1993 subfields			
	1993	1992	1991	1990	Astronomy	Chemistry	Physics	Other
Total, all institutions .....	1,513,451	1,475,085	1,383,302	1,314,472	158,506	501,651	701,552	151,742
1 Johns Hopkins U .....	112,799	127,434	117,022	91,640	20,280	4,876	77,277	10,366
2 MA Institute of Tech .....	82,262	79,456	84,110	82,688	5,050	13,566	63,646	0
3 U CA Berkeley .....	51,601	52,529	47,227	42,182	5,541	12,023	34,037	0
4 California Inst of Tech .....	46,825	43,122	43,033	37,172	9,159	11,815	25,851	0
5 U TX Austin .....	44,189	39,288	35,841	22,478	5,271	10,147	11,836	16,935
6 Stanford University .....	42,174	60,441	50,320	50,717	0	9,018	3,523	29,633
7 Cornell University .....	39,800	36,739	35,556	35,290	4,644	8,538	24,328	2,290
8 U CA San Diego .....	37,875	39,168	36,411	26,689	18,901	6,517	10,352	2,105
9 University of IL Urbana .....	33,235	32,063	31,456	31,290	1,359	7,672	9,212	14,992
10 U MD College Park .....	32,674	34,588	35,925	30,835	4,179	5,468	13,472	9,555
Total, 1st 10 insts. ....	523,434	544,828	516,901	450,981	74,384	89,640	273,534	85,876
11 University of Arizona .....	31,298	28,044	33,633	32,929	18,853	4,141	8,304	0
12 U WI Madison .....	27,544	26,405	24,321	22,378	3,577	7,484	12,805	3,678
13 University of Chicago .....	26,864	24,995	23,279	23,941	5,592	3,836	0	17,436
14 Florida State University .....	25,570	12,602	12,859	16,150	0	1,819	5,506	18,245
15 Harvard University .....	24,155	23,826	22,080	24,954	4,107	11,600	8,448	0
16 U CA Los Angeles .....	22,082	22,661	20,161	21,485	1,343	10,824	9,915	0
17 Indiana University .....	20,709	20,388	18,712	17,818	67	6,841	13,801	0
18 University of Colorado .....	19,559	18,533	17,886	18,187	5,710	5,780	8,002	67
19 Princeton University .....	16,947	18,933	17,249	16,288	2,357	4,901	9,689	0
20 Columbia U Main Division ....	16,822	15,540	15,341	15,497	2,559	6,496	1,864	5,903
Total, 1st 20 insts. ....	754,984	756,755	722,422	660,608	118,549	153,362	351,868	131,205
21 Yale University .....	16,600	16,856	16,599	13,814	881	7,017	8,626	76
22 University Hawaii Manoa ....	16,448	16,647	14,637	12,905	12,409	1,433	2,606	0
23 U of Pennsylvania .....	15,687	15,519	15,434	14,495	124	8,642	6,921	0
24 SUNY Stony Brook .....	15,147	13,900	14,839	15,165	1,016	3,333	10,772	26
25 U CA Santa Barbara .....	14,723	13,769	13,422	13,336	0	3,132	9,669	1,922
26 University of Washington .....	14,344	14,210	12,098	12,548	1,291	4,496	8,557	0
27 University of Michigan .....	13,510	13,028	13,067	10,987	625	3,386	9,138	361
28 University of Houston .....	13,424	4,234	4,466	9,692	0	11,706	1,718	0
29 U CA Irvine .....	13,411	12,759	12,106	11,110	0	5,266	7,170	975
30 University of Minnesota .....	13,351	12,795	12,595	12,563	1,023	5,666	6,662	0
Total, 1st 30 insts. ....	901,629	890,472	851,685	787,223	135,918	207,439	423,707	134,565
31 Ohio State University .....	13,179	12,590	9,217	8,130	591	7,494	5,094	0
32 Michigan State University ....	12,849	16,536	15,337	14,485	0	2,986	9,863	0
33 University of Rochester .....	12,759	12,069	11,243	12,328	797	6,395	5,567	0
34 Pennsylvania State U .....	12,749	10,991	10,095	11,153	2,264	7,571	2,823	91
35 U of Iowa .....	12,534	16,512	14,983	14,360	1,026	1,985	9,233	290
36 Purdue University .....	12,326	11,876	11,732	10,897	0	6,805	5,521	0
37 University of Notre Dame .....	11,175	9,812	8,643	8,904	0	7,985	3,190	0
38 University of Pittsburgh .....	10,490	9,792	8,527	10,141	535	5,266	3,913	776
39 Duke University .....	10,335	9,629	9,007	7,344	0	2,592	7,743	0
40 U of Alaska Fairbanks .....	10,309	7,942	8,540	7,950	3,196	459	6,494	160
Total, 1st 40 insts. ....	1,020,334	1,008,221	959,009	892,915	144,327	256,977	483,148	135,882
41 University of Virginia .....	10,251	9,644	8,829	8,134	1,018	4,471	4,762	0
42 Rutgers the State U NJ .....	9,496	10,687	9,458	9,765	0	5,267	4,229	0
43 Texas A&M University .....	9,358	9,494	8,616	8,021	0	4,358	4,389	611
44 U CA Santa Cruz .....	8,925	7,664	6,507	5,810	2,234	2,405	3,315	971
45 Georgia Institute of Tech .....	8,818	10,335	8,281	8,635	501	3,727	4,590	0
46 Arizona State University .....	8,779	8,651	7,056	6,697	19	4,453	3,181	1,126
47 U of Alabama Huntsville .....	8,620	9,925	7,724	9,339	0	4,309	4,311	0
48 Boston University .....	8,540	8,634	8,253	8,314	518	1,085	6,551	386
49 U MA Amherst .....	8,467	9,217	--	--	0	4,940	3,527	0
50 Northwestern University .....	8,444	8,755	8,748	9,357	0	5,168	3,276	0
Total, 1st 50 insts. ....	1,110,032	1,101,227	1,032,481	966,987	148,617	297,160	525,279	138,976

See explanatory information and SOURCE at end of table.

**Table B-51. Federally financed R&D expenditures in the physical sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Physical sciences total				1993 subfields			
	1993	1992	1991	1990	Astronomy	Chemistry	Physics	Other
51 U of Tennessee System .....	8,073	7,499	6,284	6,408	0	3,107	4,966	0
52 University of Oregon .....	8,028	7,788	7,952	8,895	0	4,603	3,425	0
53 University of Utah .....	7,956	8,976	6,982	6,099	0	4,830	3,126	0
54 U CA Davis .....	7,468	7,367	6,500	6,909	0	2,899	4,569	0
55 U of NC Chapel Hill .....	7,356	6,369	5,840	5,400	0	6,266	1,090	0
56 U of Southern California .....	7,196	7,570	7,168	7,039	83	5,627	1,486	0
57 Rice University .....	7,000	7,234	7,199	6,640	2,497	2,569	1,934	0
58 Vanderbilt University .....	6,604	5,695	5,846	6,068	0	1,720	4,884	0
59 Colorado State University .....	6,593	5,398	3,960	3,735	0	4,352	871	1,370
60 Washington University .....	6,137	5,985	5,195	5,231	0	2,996	3,141	0
Total, 1st 60 insts. ....	1,182,443	1,171,108	1,095,407	1,029,411	151,197	336,129	554,771	140,346
61 Louisiana State U System .....	6,028	5,495	4,758	4,912	0	2,426	3,504	98
62 University of Florida .....	6,026	5,634	5,790	7,068	542	3,371	2,113	0
63 U TX Dallas .....	5,619	5,465	3,039	3,718	0	568	5,051	0
64 CUNY City College .....	5,603	5,075	5,444	4,905	0	3,388	2,215	0
65 Carnegie Mellon U .....	5,603	5,033	5,513	5,944	0	2,317	3,218	68
66 NC State U Raleigh .....	5,495	3,676	3,092	3,797	0	1,268	4,227	0
67 University of Delaware .....	5,227	4,985	5,205	4,325	0	2,234	859	2,134
68 Brown University .....	5,026	4,963	4,480	5,355	0	2,208	2,818	0
69 University of IL Chicago .....	4,949	5,252	3,907	5,607	0	1,972	2,977	0
70 U of South Carolina .....	4,559	3,634	3,438	3,936	0	3,104	1,455	0
Total, 1st 70 insts. ....	1,236,578	1,220,320	1,140,073	1,078,978	151,739	358,985	583,208	142,646
71 Emory University .....	4,536	5,551	4,163	3,872	0	3,718	818	0
72 U of Nebraska Lincoln .....	4,418	4,142	3,189	3,008	197	2,576	1,645	0
73 VA Polytech Inst & St U .....	4,402	4,176	4,480	4,648	0	2,905	1,497	0
74 SUNY Buffalo .....	4,326	4,580	4,332	4,129	0	2,870	1,190	266
75 U CA Riverside .....	4,326	3,770	4,068	3,848	0	2,343	1,983	0
76 Utah State University .....	4,273	4,926	3,033	3,039	0	616	3,657	0
77 Georgetown University .....	4,134	4,173	4,146	3,212	0	4,076	0	58
78 Case Western Reserve U .....	3,870	3,367	3,735	5,807	108	2,236	1,526	0
79 Kent State University .....	3,821	3,291	2,521	1,861	0	353	982	2,486
80 Hampton University .....	3,765	2,116	2,396	1,854	0	490	3,275	0
Total, 1st 80 insts. ....	1,278,449	1,260,412	1,176,136	1,114,256	152,044	381,168	599,781	145,456
81 Syracuse University .....	3,695	3,724	3,732	4,204	0	1,527	2,160	8
82 Alabama A&M University .....	3,632	3,013	3,210	2,716	0	109	3,450	73
83 Rockefeller University .....	3,613	4,445	4,149	5,365	0	2,246	1,367	0
84 U Southern Mississippi .....	3,547	3,163	5,462	2,880	0	3,503	44	0
85 Wayne State University .....	3,523	3,036	1,949	2,304	0	2,318	1,205	0
86 Catholic U of America .....	3,513	3,223	3,639	3,906	0	820	1,024	1,669
87 Rensselaer Polytech Inst .....	3,509	3,430	2,452	2,966	0	2,315	1,194	0
88 KS St U Agri & App Sci .....	3,502	3,337	2,766	2,857	0	1,148	2,354	0
89 University of Mississippi .....	3,492	4,149	4,966	3,642	0	671	2,821	0
90 Iowa St U of Sci & Tech .....	3,367	2,333	2,797	2,157	0	1,713	1,654	0
Total, 1st 90 insts. ....	1,313,842	1,294,265	1,211,258	1,147,253	152,044	397,538	617,054	147,206
91 Clark Atlanta University .....	3,271	3,115	2,588	2,962	0	2,075	1,196	0
92 Northeastern University .....	3,213	2,802	2,484	2,264	0	929	2,284	0
93 Washington State U .....	3,203	2,741	1,737	1,849	0	1,738	1,465	0
94 Col of William & Mary .....	3,166	2,878	2,444	2,135	0	286	2,491	389
95 New York University .....	3,165	3,708	3,963	2,745	0	1,775	1,390	0
96 U MA Lowell .....	3,121	2,789	2,366	1,302	0	966	2,155	0
97 Oregon Grad Inst Sci Tech ..	3,111	1,991	2,357	2,811	0	2,190	921	0
98 University of Oklahoma .....	3,101	2,366	2,100	1,736	0	2,091	1,010	0
99 Oregon State University .....	3,059	3,375	2,579	2,183	0	1,963	1,096	0
100 University of Georgia .....	2,947	3,050	3,184	2,492	0	2,015	932	0
Total, 1st 100 insts. ....	1,345,199	1,323,080	1,237,060	1,169,732	152,044	413,566	631,994	147,595
Total, all other sampled insts. ....	168,252	152,005	146,242	144,740	6,462	88,085	69,558	4,147

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-52. Total and federally financed R&D expenditures in chemistry  
at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	735,633	696,741	665,851	647,079	501,651	475,605	446,814	444,252
1 U TX Austin .....	16,769	16,021	16,513	13,259	10,147	8,700	7,881	6,723
2 University of Houston .....	15,420	4,320	4,360	4,724	11,706	1,895	1,815	1,934
3 MA Institute of Tech .....	14,670	13,999	16,426	17,109	13,566	12,384	14,549	15,129
4 U CA Berkeley .....	13,566	13,835	13,906	13,804	12,023	12,008	12,210	12,219
5 California Inst of Tech .....	13,476	12,647	13,931	10,667	11,815	10,970	12,006	8,629
6 Harvard University .....	13,442	14,103	12,384	13,114	11,600	12,387	10,972	11,855
7 U CA Los Angeles .....	12,136	12,137	10,519	11,217	10,824	10,841	9,327	10,216
8 Pennsylvania State U .....	12,056	11,719	9,635	9,148	7,571	6,972	6,630	6,429
9 U MD College Park .....	11,449	9,991	8,415	10,977	5,468	4,687	4,566	4,774
10 University of IL Urbana .....	10,864	9,439	9,457	9,230	7,672	6,804	6,484	6,563
Total, 1st 10 insts. ....	133,848	118,211	115,546	113,249	102,392	87,648	86,440	84,471
11 U of Pennsylvania .....	10,556	9,812	10,633	8,077	8,642	8,059	8,168	7,330
12 Stanford University .....	10,551	10,846	8,882	9,693	9,018	8,414	7,452	8,839
13 U WI Madison .....	10,383	9,804	8,878	8,937	7,484	6,929	5,739	6,041
14 Cornell University .....	10,091	10,550	10,825	10,042	8,538	8,852	8,365	7,211
15 Ohio State University .....	9,768	8,289	7,137	6,565	7,494	6,300	4,844	4,152
16 University of Michigan .....	9,518	5,970	5,031	3,735	3,386	4,138	3,423	2,786
17 Indiana University .....	9,476	8,853	7,324	7,344	6,841	6,157	5,173	5,225
18 Purdue University .....	8,913	8,879	8,690	8,672	6,805	6,909	7,086	6,893
19 University of Notre Dame .....	8,831	7,274	6,170	6,348	7,985	6,582	5,599	5,667
20 U MA Amherst .....	8,795	9,583	--	--	4,940	5,522	--	--
Total, 1st 20 insts. ....	230,730	208,071	189,116	182,662	173,525	155,510	142,289	138,615
21 Texas A&M University .....	8,599	7,903	8,201	8,046	4,358	4,187	4,395	3,716
22 Yale University .....	8,186	7,974	7,587	6,037	7,017	6,752	6,521	5,256
23 Northwestern University .....	7,975	7,651	7,781	7,219	5,168	5,372	5,462	5,465
24 Princeton University .....	7,927	8,557	8,663	9,099	4,901	5,952	5,794	6,104
25 University of Colorado .....	7,820	6,895	6,863	6,041	5,780	5,494	5,422	5,218
26 Arizona State University .....	7,726	6,755	8,054	7,967	4,453	4,414	3,696	3,626
27 Rutgers the State U NJ .....	7,706	8,263	7,818	7,812	5,267	5,993	5,426	6,016
28 U CA San Diego .....	7,632	9,076	8,811	8,120	6,517	7,799	7,949	7,422
29 Columbia U Main Division .....	7,377	5,985	6,305	5,858	6,496	5,785	5,944	5,540
30 U of NC Chapel Hill .....	7,270	6,306	5,613	5,310	6,266	5,281	4,980	4,651
Total, 1st 30 insts. ....	308,948	283,436	264,812	254,171	229,748	212,539	197,878	191,629
31 University of Florida .....	7,106	5,847	5,153	5,396	3,371	2,895	2,802	2,905
32 University of Washington .....	7,034	6,538	5,789	6,057	4,496	4,011	3,796	4,139
33 VA Polytech Inst & St U .....	6,991	7,178	7,157	6,321	2,905	2,950	2,958	2,522
34 University of Rochester .....	6,924	5,871	6,067	6,537	6,395	5,402	5,650	5,998
35 University of Minnesota .....	6,851	5,952	6,160	6,663	5,666	5,062	5,004	5,857
36 Georgia Institute of Tech .....	6,661	9,656	6,796	5,215	3,727	5,426	3,902	2,941
37 Michigan State University .....	6,409	3,526	3,302	3,138	2,986	2,274	2,109	1,992
38 University of Pittsburgh .....	6,123	5,876	4,826	5,832	5,266	4,959	3,958	4,721
39 U of Southern California .....	6,122	6,337	5,510	5,667	5,627	5,826	5,427	5,358
40 University of Arizona .....	6,119	6,030	5,531	5,034	4,141	3,969	3,580	3,210
Total, 1st 40 insts. ....	375,288	346,247	321,103	310,031	274,328	255,313	237,064	231,272
41 University of Oregon .....	6,096	6,076	6,211	6,760	4,603	4,411	4,751	5,182
42 University of Utah .....	5,773	6,697	6,101	5,089	4,830	5,225	4,688	3,746
43 U CA Irvine .....	5,675	6,237	5,546	4,835	5,266	5,682	5,226	4,437
44 University of Virginia .....	5,555	5,225	5,089	5,281	4,471	4,191	4,072	4,038
45 Georgetown University .....	5,348	5,350	5,039	3,860	4,076	4,110	3,963	3,088
46 University of Georgia .....	5,331	5,042	5,508	4,453	2,015	2,095	2,198	1,651
47 U of Alabama Huntsville .....	5,252	5,157	4,021	4,317	4,309	4,591	3,610	3,880
48 Johns Hopkins U .....	5,227	5,356	6,564	5,435	4,876	4,992	6,044	4,994
49 Colorado State University .....	5,211	5,125	4,093	3,683	4,352	4,453	3,146	2,998
50 University of Oklahoma .....	4,922	4,641	3,713	3,287	2,091	1,652	1,443	1,221
Total, 1st 50 insts. ....	429,678	401,153	372,988	357,031	315,217	296,715	276,205	266,507

See explanatory information and SOURCE at end of table.



**Table B-52. Total and federally financed R&D expenditures in chemistry at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
51 SUNY Stony Brook .....	4,880	4,691	5,426	4,897	3,333	3,129	3,940	3,816
52 U of Tennessee System .....	4,823	4,730	4,681	4,114	3,107	3,171	2,272	2,441
53 Wayne State University .....	4,807	7,756	6,458	5,455	2,318	2,341	1,500	1,798
54 Rensselaer Polytech Inst .....	4,622	5,214	3,811	4,551	2,315	2,497	1,778	2,214
55 Emory University .....	4,576	5,646	4,269	4,228	3,718	4,752	3,290	3,509
56 SUNY Buffalo .....	4,444	4,932	4,789	4,770	2,870	3,018	2,881	2,955
57 U of South Carolina .....	4,363	4,481	3,645	4,307	3,104	2,728	2,540	2,992
58 Florida State University .....	4,341	3,655	4,696	5,345	1,819	1,928	1,649	1,320
59 Louisiana State U System .....	4,260	3,959	4,555	4,348	2,426	1,855	1,729	1,887
60 University of Chicago .....	4,247	4,669	4,728	9,331	3,836	4,235	4,597	8,524
Total, 1st 60 insts. ....	475,041	450,886	420,046	408,377	344,063	326,369	302,381	297,963
61 University of Kansas .....	4,208	5,254	5,059	5,450	1,951	1,877	1,788	2,099
62 U of Nebraska Lincoln .....	4,198	4,698	2,592	2,658	2,576	2,931	1,952	1,925
63 North Dakota State U .....	4,145	2,852	6,256	1,423	1,353	1,168	919	786
64 U of Missouri Columbia .....	4,139	1,844	1,754	1,571	960	795	838	672
65 U Southern Mississippi .....	4,130	3,325	5,812	3,266	3,503	3,119	5,435	2,850
66 University of Delaware .....	4,053	3,217	3,175	2,381	2,234	1,874	1,877	1,472
67 Washington University .....	3,899	3,525	2,928	3,436	2,996	2,865	2,336	2,759
68 Brown University .....	3,781	3,424	2,822	2,636	2,208	2,095	1,972	2,254
69 Duke University .....	3,694	3,241	3,035	2,974	2,592	2,262	1,750	1,677
70 University of IL Chicago .....	3,668	3,666	4,187	4,494	1,972	2,441	2,222	2,930
Total, 1st 70 insts. ....	514,956	485,932	457,666	438,666	366,408	347,796	323,470	317,387
71 Rockefeller University .....	3,666	5,027	7,023	9,248	2,246	3,295	3,289	4,331
72 U CA Santa Barbara .....	3,646	4,327	3,652	4,399	3,132	3,835	3,201	3,869
73 Oregon Grad Inst Sci Tech ..	3,583	2,797	2,580	2,300	2,190	1,757	2,125	2,004
74 University of Cincinnati .....	3,505	3,747	4,004	3,605	2,153	2,402	2,241	2,151
75 Rice University .....	3,491	3,327	3,526	3,337	2,569	2,114	2,251	2,330
76 CUNY City College .....	3,488	2,756	2,671	2,268	3,388	2,755	2,671	2,198
77 Iowa St U of Sci & Tech .....	3,486	2,720	5,621	3,851	1,713	1,139	1,843	1,331
78 U CA Davis .....	3,355	3,171	3,128	3,582	2,899	2,621	2,632	2,996
79 Lehigh University .....	3,210	3,599	3,694	3,770	1,516	1,880	1,780	1,745
80 Texas Tech University .....	3,176	3,226	2,451	2,335	1,318	1,289	852	586
Total, 1st 80 insts. ....	549,562	520,629	496,016	477,361	389,532	370,883	346,355	340,928
81 U Arkansas Fayetteville .....	3,080	2,773	2,541	2,110	1,342	1,034	1,026	948
82 U CA Riverside .....	3,054	2,384	2,215	2,076	2,343	2,007	1,994	1,890
83 Case Western Reserve U .....	3,043	2,856	3,077	8,252e	2,236	1,821	2,135	4,246
84 Carnegie Mellon U .....	3,016	2,489	2,873	3,239	2,317	1,989	2,472	2,770
85 U of Iowa .....	2,959	3,627	3,461	4,294	1,985	2,448	2,137	2,929
86 Oregon State University .....	2,841	3,541	2,522	2,647	1,963	2,424	1,660	1,472
87 University of Akron .....	2,801	1,648	2,084	2,001	637	719	738e	769
88 U CA Santa Cruz .....	2,765	2,338	2,157	1,640	2,405	1,956	1,730	1,398
89 Clemson University .....	2,652	2,271	1,993	1,857	786	584	426	503
90 CUNY Hunter College .....	2,542	2,366	2,484	2,307	1,816	1,813	1,869	1,668
Total, 1st 90 insts. ....	578,315	546,922	521,423	507,784	407,362	387,678	362,542	359,521
91 Auburn University .....	2,511	2,797	2,072	2,280	268	330	361	361
92 Washington State U .....	2,497	2,296	1,045	1,233	1,738	1,787	921	866
93 Clark Atlanta University .....	2,447	2,330	2,440	2,472i	2,075	1,976	1,834	1,889i
94 University of Connecticut .....	2,443	2,019	2,078	2,146	506	506	504	702
95 Inst Paper Sci and Tech .....	2,404	2,129	821	733	743	727	177	163
96 Boston College .....	2,350	2,173	2,315	2,291	2,012	1,960	2,192	1,856
97 New York University .....	2,348	2,399	3,012	1,693	1,775	1,887	2,453	1,397
98 The University of Alabama .....	2,337	2,291	1,967	2,195	1,226	1,340	953	1,386
99 NC State U Raleigh .....	2,269	1,757	1,619	1,103	1,268	853	719	630
100 Virginia Commonwealth U .....	2,155	1,818	1,406	1,523	1,316	1,242	1,028	1,050
Total, 1st 100 insts. ....	602,076	568,931	540,198	525,453	420,289	400,286	373,684	369,821
Total, all other sampled insts. ....	133,557	127,810	125,653	121,626	81,362	75,319	73,130	74,431

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-53. Total and federally financed R&D expenditures in physics  
at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	928,334	912,553	869,877	841,738	701,552	700,093	668,408	652,053
1 Johns Hopkins U .....	78,624	83,658	78,983	65,697	77,277	82,834	78,617	65,287
2 MA Institute of Tech .....	72,908	71,814	74,892	71,674	63,646	63,294	65,982	63,981
3 U CA Berkeley .....	38,129	39,351	34,707	30,565	34,037	35,800	31,206	26,759
4 U MD College Park .....	27,568	27,585	33,084	29,200	13,472	13,609	17,715	14,512
5 California Inst of Tech .....	26,794	25,812	24,028	22,702	25,851	24,599	22,872	21,255
6 Cornell University .....	26,521	26,089	26,195	27,415	24,328	22,939	22,675	22,913
7 Michigan State University .....	21,168	19,985	18,713	17,760	9,863	14,262	13,228	12,493
8 Indiana University .....	19,369	19,166	15,823	14,759	13,801	13,904	13,243	12,322
9 University of Michigan .....	19,166	15,988	14,541	9,818	9,138	7,853	8,758	7,401
10 U TX Austin .....	17,316	17,529	18,033	19,009	11,836	11,891	11,397	11,638
Total, 1st 10 insts. ....	347,563	346,977	338,999	308,599	283,249	290,985	285,693	258,561
11 University of Arizona .....	15,891	14,595	16,123	18,532	8,304	7,099	7,918	8,254
12 SUNY Stony Brook .....	15,620	14,186	14,600	15,038	10,772	9,741	9,969	10,690
13 U WI Madison .....	15,299	15,446	14,150	11,963	12,805	12,887	12,106	10,397
14 Princeton University .....	12,539	12,441	11,468	10,976	9,689	9,973	9,341	8,357
15 U of Iowa .....	12,131	14,879	13,063	11,476	9,233	12,378	11,233	9,945
16 U CA San Diego .....	11,811	12,675	12,419	9,377	10,352	11,647	11,583	8,531
17 University of IL Urbana .....	11,364	11,382	11,511	12,478	9,212	9,436	9,651	10,706
18 Rutgers the State U NJ .....	11,356	12,237	10,561	9,461	4,229	4,694	4,032	3,749
19 U CA Los Angeles .....	10,930	11,780	10,752	10,782	9,915	10,562	9,836	10,192
20 U CA Santa Barbara .....	10,906	10,016	9,327	8,529	9,669	8,940	8,344	7,496
Total, 1st 20 insts. ....	475,410	476,614	462,973	427,211	377,429	388,342	379,706	346,878
21 University of Colorado .....	10,170	9,531	8,383	7,151	8,002	7,897	6,962	6,148
22 Harvard University .....	9,990	10,207	10,270	10,363	8,448	8,145	7,928	8,236
23 Yale University .....	9,860	10,319	9,999	8,264	8,626	9,123	9,180	7,756
24 University of Washington .....	9,233	9,109	7,730	7,785	8,557	8,693	7,330	7,545
25 Florida State University .....	9,143	12,664	17,758	19,672	5,506	8,009	11,210	14,830
26 Duke University .....	8,592	8,117	7,655	6,111	7,743	7,367	7,257	5,667
27 University of Minnesota .....	8,450	8,888	10,625	8,225	6,662	6,812	6,890	5,475
28 U CA Irvine .....	8,323	7,635	7,343	7,317	7,170	6,904	6,801	6,642
29 U of Tennessee System .....	8,286	7,227	6,717	6,622	4,966	4,328	4,012	3,967
30 U of Pennsylvania .....	8,266	8,548	7,538	7,320	6,921	7,417	7,215	7,084
Total, 1st 30 insts. ....	565,723	568,879	556,991	516,041	450,030	463,037	454,491	420,228
31 Georgia Institute of Tech .....	8,204	7,573	5,929	9,783	4,590	4,255	3,405	5,516
32 Ohio State University .....	8,101	7,864	6,925	6,268	5,094	5,781	4,019	3,750
33 U of Alaska Fairbanks .....	8,021	7,174	6,807	5,967	6,494	5,002	4,950	3,593
34 Boston University .....	7,904	8,339	6,946	6,309	6,551	7,179	6,309	5,971
35 Purdue University .....	7,817	6,935	6,444	5,795	5,521	4,967	4,646	4,004
36 Texas A&M University .....	7,505	7,853	5,533	7,209	4,389	5,117	4,089	4,106
37 University of Virginia .....	6,723	6,457	5,794	5,280	4,762	4,757	4,232	3,555
38 University of Rochester .....	6,157	6,821	5,367	6,205	5,567	6,050	5,246	5,955
39 University of Oregon .....	6,001	5,455	4,793	5,354	3,425	3,377	3,201	3,713
40 U TX Dallas .....	5,860	5,902	3,522	4,408	5,051	4,892	2,393	2,916
Total, 1st 40 insts. ....	638,016	639,252	615,051	578,619	501,474	514,414	496,981	463,307
41 Vanderbilt University .....	5,788	4,761	5,099	5,219	4,884	3,992	4,747	4,930
42 NC State U Raleigh .....	5,635	5,194	5,013	3,989	4,227	2,823	2,373	2,900
43 U CA Davis .....	5,504	5,499	4,343	4,269	4,569	4,746	3,868	3,913
44 Louisiana State U System .....	5,466	6,092	4,830	4,454	3,504	3,414	2,806	2,906
45 U of Alabama Huntsville .....	5,181	6,287	4,933	6,527	4,311	5,334	4,004	5,294
46 U MA Amherst .....	5,123	5,073	--	--	3,527	3,695	--	--
47 Arizona State University .....	4,784	4,662	3,021	3,043	3,181	3,335	2,235	2,196
48 Pennsylvania State U .....	4,765	3,639	3,225	3,365	2,823	1,998	1,722	2,128
49 University of Pittsburgh .....	4,582	4,768	4,692	5,139	3,913	3,727	3,586	3,802
50 Brown University .....	4,549	4,540	4,085	3,526	2,818	2,868	2,508	3,101
Total, 1st 50 insts. ....	689,393	689,767	654,292	618,150	539,231	550,346	524,830	494,477

See explanatory information and SOURCE at end of table.

**Table B-53. Total and federally financed R&D expenditures in physics at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
51 University of IL Chicago .....	4,539	3,939	2,596	3,710	2,977	2,811	1,685	2,677
52 University of Notre Dame .....	4,533	4,432	4,136	4,387	3,190	3,230	3,044	3,237
53 University of Florida .....	4,411	4,357	4,229	5,157	2,113	2,263	2,302	3,208
54 Alabama A&M University .....	4,245	3,413	3,517	3,094	3,450	2,862	3,050	2,592
55 Utah State University .....	4,221	5,176	3,281	3,209	3,657	4,424	2,588	2,671
56 Oklahoma State University ..	4,019	3,560	3,441	2,634	961	920	822	1,082
57 Northwestern University .....	3,962	3,999	4,057	4,541	3,276	3,383	3,286	3,892
58 Washington University .....	3,866	3,611	3,289	3,118	3,141	3,120	2,859	2,472
59 Stanford University .....	3,853	5,089	4,374	4,528	3,523	4,138	3,833	4,344
60 CUNY City College .....	3,772	2,611	3,208	3,155	2,215	2,320	2,773	2,707
Total, 1st 60 insts. ....	730,814	729,954	690,420	655,683	567,734	579,817	551,072	523,359
61 University of Mississippi .....	3,751	4,432	5,281	3,495	2,821	3,576	4,379	3,082
62 Wayne State University .....	3,710	3,161	2,438	2,445	1,205	695	449	506
63 U CA Santa Cruz .....	3,629	4,219	3,573	3,482	3,315	3,272	2,852	3,042
64 Carnegie Mellon U .....	3,614	3,357	3,115	3,338	3,218	3,000	2,864	3,079
65 U of Missouri Columbia .....	3,482	3,257	3,369	1,974	616	610	702	298
66 University of Houston .....	3,440	3,971	3,458	11,149	1,718	2,339	2,622	7,758
67 University of Utah .....	3,390	4,483	2,758	3,026	3,126	3,751	2,294	2,353
68 Hampton University .....	3,275	1,898	2,267	1,424	3,275	1,898	2,267	1,424
69 Syracuse University .....	3,182	2,971	2,819	2,986	2,160	2,280	2,197	2,141
70 U of Nebraska Lincoln .....	2,944	2,475	2,464	1,961	1,645	1,093	1,179	1,065
Total, 1st 70 insts. ....	765,231	764,178	721,962	690,963	590,833	602,331	572,877	548,107
71 University Hawaii Manoa ....	2,931	2,491	1,858	1,660	2,606	2,226	1,795	1,563
72 Col of William & Mary .....	2,879	2,784	2,815	2,442	2,491	2,274	2,147	1,805
73 U MA Lowell .....	2,854	2,150	1,872	1,647	2,155	1,853	1,537	890
74 U TX MD Anderson Cnrc Ctr ..	2,824	3,772	4,183	4,106	2,080	1,853	1,966	1,860
75 University of New Mexico .....	2,815	2,348	1,805	1,724	1,873	1,232	1,200	1,258
76 University of Oklahoma .....	2,663	2,166	1,977	1,743	1,010	714	657	515
77 KS St U Agri & App Sci .....	2,590	2,302	1,760	2,096	2,354	2,078	1,616	1,920
78 Rice University .....	2,572	2,800	2,950	2,682	1,934	2,288	2,395	2,159
79 Oregon Grad Inst Sci Tech ..	2,545	910	1,146	1,484	921	234	232	807
80 University of Georgia .....	2,500	2,459	2,553	2,253	932	955	986	841
Total, 1st 80 insts. ....	792,404	788,360	744,881	712,800	609,189	618,038	587,408	561,725
81 The University of Alabama ....	2,482	2,850	2,192	1,272	819	887	585	360
82 US Naval Postgrad School ..	2,419	2,174	2,282	2,477	2,082	2,046	2,279	2,443
83 Iowa St U of Sci & Tech .....	2,389	1,834	2,785	1,476	1,654	1,194	954	826
84 Rensselaer Polytech Inst .....	2,385	1,948	1,445	1,546	1,194	933	674	752
85 Rockefeller University .....	2,371	2,118	2,008	2,413	1,367	1,150	860	1,034
86 Northeastern University .....	2,339	1,950	3,076	2,080	2,284	1,812	2,220	1,726
87 Clemson University .....	2,303	2,486	2,104	1,710	683	1,142	691	586
88 VA Polytech Inst & St U .....	2,258	2,049	2,344	2,890	1,497	1,226	1,522	1,872
89 U Arkansas Fayetteville .....	2,222	1,266	1,573	1,386	766	363	381	338
90 Case Western Reserve U ....	2,177	1,816	1,919	1,770	1,526	1,407	1,470	1,561
Total, 1st 90 insts. ....	815,749	808,851	766,609	731,820	623,061	630,198	599,044	573,223
91 U CA Riverside .....	2,110	1,794	2,084	1,968	1,983	1,763	2,074	1,958
92 Washington State U .....	2,056	1,281	1,037	1,192	1,465	954	816	983
93 U of NC Chapel Hill .....	1,976	1,686	1,352	1,171	1,090	1,088	860	749
94 University of Denver .....	1,945	1,947	2,356	1,853	1,684	1,684	2,356	1,519
95 Columbia U Main Division ....	1,869	1,411	1,759	1,618	1,864	1,411	1,759	1,618
96 SUNY Buffalo .....	1,834	1,783	1,977	1,564	1,190	1,162	1,132	776
97 University of Kansas .....	1,789	1,509	1,412	1,045	985	770	771	689
98 Lehigh University .....	1,771	1,758	1,301	1,468	1,253	1,337	825	999
99 University of Kentucky .....	1,768	1,234	1,040	1,002	1,584	1,172	924	870
100 U of South Carolina .....	1,724	1,906	1,610	1,261	1,455	906	898	837
Total, 1st 100 insts. ....	834,591	825,160	782,537	745,962	637,614	642,445	611,459	584,221
Total, all other sampled insts. ....	93,743	87,393	87,340	95,776	63,938	57,648	56,949	67,832

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:**  
e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-54. R&D expenditures in the environmental sciences  
at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Environmental sciences total				1993 subfields			
	1993	1992	1991	1990	Atmos- pheric	Earth sciences	Ocean- ography	Other
Total, all institutions .....	1,317,619	1,238,781	1,116,410	1,067,846	211,611	415,444	460,566	229,998
1 U CA San Diego .....	78,807	73,193	70,038	73,805	0	19,074	59,733	0
2 Texas A&M University .....	74,688	65,732	69,272	64,027	1,929	3,664	49,914	19,181
3 Woods Hole Ocngrphc Inst ..	64,520	69,716	64,814 i	60,404	4,583 i	21,740 i	16,666 i	21,531 i
4 University of Washington .....	55,031	59,379	22,771	21,389	5,833	5,652	43,280	266
5 Johns Hopkins U .....	43,880	41,082	39,546	41,412	11,106	3,183	17,809	11,782
6 U of Alaska Fairbanks .....	32,623 i	31,109	31,485	24,879	1,550 i	13,679 i	17,294 i	100 i
7 University of Colorado .....	32,086	28,725	25,508	23,643	16,774	11,060	2,081	2,171
8 Columbia U Main Division .....	28,472	27,480	29,777	24,529	0	0	28,472	0
9 University of IL Urbana .....	27,791	26,970	25,670	23,497	1,772	22,694	0	3,325
10 U TX Austin .....	27,457	28,888	28,919	25,285	0	17,466	9,991	0
Total, 1st 10 insts. ....	465,355	452,274	407,800	382,870	43,547	118,212	245,240	58,356
11 Oregon State University .....	25,240	24,122	21,144	18,623	334	1,608	23,298	0
12 U WI Madison .....	24,004	21,726	21,194	22,033	14,888	2,717	2,840	3,559
13 University of Michigan .....	23,999	20,533	17,742	17,154	11,876	5,346	2,388	4,389
14 University of Miami .....	22,848	19,840	19,149	18,626	11,335	61	8,259	3,193
15 U of Rhode Island .....	22,227 i	18,439 i	17,442	18,944	1,979 i	216 i	20,032 i	0 i
16 U of New Hampshire .....	20,840	18,339	15,375	14,167	8,177	1,491	471	10,701
17 University of Arizona .....	20,633	20,308	16,176	22,397	2,546	5,173	0	12,914
18 VA Polytech Inst & St U .....	20,434	11,891	6,294	3,434	0	8,000	0	12,434
19 Louisiana State U System .....	19,076	17,877	16,303	14,845	0	4,873	11,797	2,406
20 U MD Center for EES .....	19,055	18,557	16,205	15,652	0	0	17,815	1,240
Total, 1st 20 insts. ....	683,711	643,906	574,824	548,745	94,682	147,697	332,140	109,192
21 Pennsylvania State U .....	18,477	17,918	15,536	14,095	5,419	10,939	0	2,119
22 SUNY Stony Brook .....	15,463	11,799	11,140	9,874	2,054	4,416	8,993	0
23 Col of William & Mary .....	14,944	13,018	12,784	12,794	0	22	14,922	0
24 Desert Research Institute .....	14,680	15,397	14,043	14,118	3,472	6,601	0	4,607
25 MA Institute of Tech .....	14,666	13,069	12,580	12,247	293	12,173	2,200	0
26 U of Southern California .....	14,596	12,736	7,798	7,207	0	7,195	4,259	3,142
27 U CA Los Angeles .....	14,196	13,151	13,813	12,215	2,945	11,251	0	0
28 U of Tennessee System .....	13,801	11,993	9,817	8,312	84	1,632	0	12,085
29 Utah State University .....	13,544	10,643	11,813	10,843	9,040	4,504	0	0
30 University of Minnesota .....	13,185	11,830	12,053	8,802	0	6,388	0	6,797
Total, 1st 30 insts. ....	831,263	775,460	696,201	659,252	117,989	212,818	362,514	137,942
31 California Inst of Tech .....	12,870	13,114	16,627	15,957	0	12,286	0	584
32 U MD College Park .....	12,858	10,558	8,232	6,437	9,806	1,553	1,499	0
33 U of South Carolina .....	12,276	11,835	9,786	9,617	0	9,001	2,615	660
34 University of Oklahoma .....	11,921	9,192	11,009	9,056	7,422	4,483	0	16
35 Colorado State University .....	11,427	16,885	9,520	8,207	10,447	980	0	0
36 U of Nevada Las Vegas .....	11,234	6,243	5,387	4,525 i	65	820	30	10,319
37 New Mexico State U .....	10,719	8,631	3,069	2,108 i	9,901	732	0	86
38 University Hawaii Manoa .....	10,262	17,406	20,168	24,188	0	6,603	2,052	1,607
39 Florida State University .....	10,178	10,288	11,948	12,945	4,763	1,282	2,839	1,294
40 U CA Santa Barbara .....	10,085	10,488	10,014	9,611	0	2,633	7,383	69
Total, 1st 40 insts. ....	945,093	890,100	801,961	761,903	160,393	253,191	378,932	152,577
41 U of NC Chapel Hill .....	9,893	7,989	6,937	5,192	0	6,730	3,163	0
42 San Jose State University .....	9,427	5,300	4,433	3,805	906	380	8,141	0
43 Harvard University .....	9,054	9,839	7,499	6,303	0	9,054	0	0
44 NC State U Raleigh .....	8,945	6,503	6,584	5,301	0	0	4,550	4,395
45 Rutgers the State U NJ .....	8,434	8,507	7,909	5,949	431	427	2,143	5,433
46 U of Central Florida .....	8,225	7,107	7,307	7,084	8,195	30	0	0
47 Princeton University .....	8,087	7,150	6,974	6,270	3,201	4,886	0	0
48 University of Kansas .....	8,026	7,812	6,759	6,196	0	7,713	0	313
49 NJ Inst of Technology .....	8,007	8,396	5,548	4,922	0	0	0	8,007
50 University of Wyoming .....	7,855	5,742	3,460	3,046	2,134	3,478	0	2,243
Total, 1st 50 insts. ....	1,031,046	964,445	865,371	815,971	175,260	285,889	396,929	172,968

See explanatory information and SOURCE at end of table.

**Table B-54. R&D expenditures in the environmental sciences  
at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Environmental sciences total				1993 subfields			
	1993	1992	1991	1990	Atmos- pheric	Earth sciences	Ocean- ography	Other
51 U CA Santa Cruz .....	7,805	9,856	6,836	4,694	0	2,504	5,289	12
52 Georgia Institute of Tech .....	7,640	7,128	5,519	10,257	1,328	5,794	0	518
53 University of Connecticut .....	7,387	7,300	8,114	7,311	0	334	7,053	0
54 SUNY Albany .....	7,274	6,255	7,556	8,881	6,988	286	0	0
55 University of Georgia .....	7,187	6,252	6,625	6,737	0	3,503	3,684	0
56 University of Delaware .....	7,034	7,746	6,563	6,721	0	740	6,294	0
57 U of South Florida .....	6,772	7,867	6,305	5,063	0	758	6,014	0
58 Ohio State University .....	6,756	6,728	7,210	5,150	0	3,271	0	3,485
59 University of Virginia .....	6,611	6,192	4,827	5,322	4,054	0	2,233	324
60 West Virginia University .....	6,571	5,386	5,273	6,314	0	1,117	0	5,454
Total, 1st 60 insts. ....	1,102,083	1,035,155	930,199	882,421	187,630	304,196	427,496	182,761
61 U MA Amherst .....	6,383	6,158	--	--	0	4,243	0	2,140
62 Stanford University .....	5,761	6,882	5,598	2,804	0	4,287	1,474	0
63 U of NC Wilmington .....	5,404	--	--	--	0	19	5,385	0
64 Cornell University .....	5,359	5,106	6,496	6,215	0	3,810	0	1,549
65 U of Nevada Reno .....	5,181	4,699	4,132	4,424	19	4,402	9	751
66 U CA Berkeley .....	4,888	5,259	3,619	5,389	0	4,802	0	86
67 Brown University .....	4,858	5,106	5,241	4,669	0	0	0	4,858
68 U of Maine Orono .....	4,712	4,448	5,107	4,350	0	3,255	1,457	0
69 NM Inst Mining & Tech .....	4,606	5,891	5,235i	4,576	0	3,528	0	1,078
70 U of Nebraska Lincoln .....	4,186	6,941	5,657	2,996	2,689	1,497	0	0
Total, 1st 70 insts. ....	1,153,421	1,085,645	971,284	917,844	190,338	334,039	435,821	193,223
71 Tufts University .....	4,035	3,688	3,565	4,148	0	4	0	4,031
72 Duke University .....	4,024	3,492	2,797	2,520	0	1,250	2,774	0
73 US Naval Postgrad School ..	3,916	3,231	3,426	3,558	1,890	0	2,026	0
74 Arizona State University .....	3,836	8,830	5,376	7,529	0	3,811	0	25
75 University of Utah .....	3,672	4,229	3,659	3,521	1,689	1,983	0	0
76 Oregon Grad Inst Sci Tech ..	3,590	2,687	2,598	2,165	891	0	0	2,699
77 Old Dominion University .....	3,456	3,424	1,642	1,536	0	0	1,433	2,023
78 Washington University .....	3,439	2,274	1,987	1,999	0	3,439	0	0
79 University of Chicago .....	3,106	3,156	3,752	4,089	0	3,106	0	0
80 Mississippi State U .....	2,833	1,043	1,427	1,318	0	60	0	2,773
Total, 1st 80 insts. ....	1,189,328	1,121,699	1,001,513	950,227	194,808	347,692	442,054	204,774
81 U of Alabama Huntsville .....	2,819	2,644	923	1,406	2,819	0	0	0
82 Rice University .....	2,794	2,878	2,685	2,849	0	1,030	0	1,764
83 University of Idaho .....	2,794	2,588	1,961	2,006	0	1,368	0	1,426
84 Memphis State University .....	2,773	2,741	3,047	2,946	0	2,773	0	0
85 Tarleton State University .....	2,766	1,334	845	252	0	2,766	0	0
86 U of PR Mayaguez .....	2,765	967i	1,196i	1,424	0	198	2,306	261
87 U WI Milwaukee .....	2,720	3,075	2,741	2,740	0	268	2,414	38
88 Western Michigan U .....	2,713	1,577	1,334	753	91	1,918	57	647
89 Carnegie Mellon U .....	2,424	2,232	2,127	1,886	0	0	0	2,424
90 Yale University .....	2,314	2,309	2,359	2,329	1,006	831	369	108
Total, 1st 90 insts. ....	1,216,210	1,144,044	1,020,731	968,818	198,724	358,844	447,200	211,442
91 Southern Methodist U .....	2,223	2,874	3,991	7,011i	0	2,223	0	0
92 Purdue University .....	2,221	2,155	2,202	1,882	1,444e	777e	0	0
93 SD Sch of Mines & Tech .....	2,197	2,007	1,620	1,504	2,197	0	0	0
94 SUNY Col Env Sci & Frstry ..	2,187	1,846	1,864	2,177	1,189	147	448	403
95 Indiana University .....	2,167	1,666	765	555	0	2,167	0	0
96 Western Illinois U .....	2,035i	1,525i	1,186i	848i	125i	628i	947i	335i
97 University of New Mexico .....	1,987	1,499	1,665	1,628	522	1,465	0	0
98 U WI Superior .....	1,977	1,863	1,702	1,692	0	0	21	1,956
99 University of Florida .....	1,706	5,493	5,270	4,526	0	1,037	481	188
100 U CA Riverside .....	1,673	1,344	1,413	1,519	0	1,673	0	0
Total, 1st 100 insts. ....	1,236,583	1,166,316	1,042,409	992,160	204,201	368,961	449,097	214,324
Total, all other sampled insts. ....	81,036	72,465	74,001	75,686	7,410	46,483	11,469	15,674

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-55. Federally financed R&D expenditures in the environmental sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Environmental sciences total				1993 subfields			
	1993	1992	1991	1990	Atmos- pheric	Earth sciences	Ocean- ography	Other
Total, all institutions .....	870,361	790,129	699,145	680,748	160,405	242,450	331,637	135,869
1 Woods Hole Ocngrphc Inst ..	57,698	61,785	56,693i	52,642	3,925i	20,204i	14,660i	18,909i
2 U CA San Diego .....	57,152	50,757	47,954	53,102	0	11,569	45,583	0
3 Texas A&M University .....	57,072	48,909	47,120	45,980	1,652	609	40,541	14,270
4 University of Washington .....	50,789	56,500	21,133	20,274	5,421	4,935	40,284	149
5 Johns Hopkins U .....	42,196	38,508	36,233	37,661	11,086	2,867	17,798	10,445
6 Columbia U Main Division .....	28,197	27,068	29,006	23,965	0	0	28,197	0
7 University of Colorado .....	24,097	22,201	20,470	20,252	12,723	8,265	1,271	1,838
8 U of Alaska Fairbanks .....	23,461i	18,077	19,382	14,079	1,550i	11,128i	10,732i	51i
9 Oregon State University .....	20,603	20,183	17,962	16,568	334	968	19,301	0
10 University of Miami .....	20,158	17,628	16,288	14,981	10,565	45	6,882	2,666
Total, 1st 10 insts. ....	381,423	361,616	312,241	299,504	47,256	60,590	225,249	48,328
11 U of Rhode Island .....	19,326i	15,098i	14,209	14,239	1,726i	130i	17,470i	0i
12 University of Michigan .....	16,624	14,600	12,631	13,150	10,448	2,502	1,537	2,137
13 U WI Madison .....	16,554	14,470	14,109	15,865	12,565	1,494	709	1,786
14 VA Polytech Inst & St U .....	16,147	6,130	3,487	1,580	0	3,713	0	12,434
15 U of New Hampshire .....	14,041	13,077	11,745	9,198	6,164	1,192	196	6,489
16 California Inst of Tech .....	12,123	12,154	15,811	15,155	0	11,953	0	170
17 MA Institute of Tech .....	11,829	10,704	10,160	9,776	237	9,818	1,774	0
18 U TX Austin .....	11,820	12,048	10,558	6,644	0	7,885	3,935	0
19 U of Southern California .....	10,738	9,939	6,294	5,196	0	6,190	3,268	1,280
20 Colorado State University .....	10,608	8,159	8,082	7,414	9,885	723	0	0
Total, 1st 20 insts. ....	521,233	477,995	419,327	397,721	88,281	106,190	254,138	72,624
21 Desert Research Institute .....	10,539	8,219	7,337	6,983	2,676	5,827	0	2,036
22 Pennsylvania State U .....	10,287	8,774	7,245	6,313	4,039	5,867	0	381
23 U of Tennessee System .....	10,232	8,595	6,357	4,907	66	1,079	0	9,087
24 U CA Los Angeles .....	9,457	8,923	9,763	8,654	2,648	6,809	0	0
25 New Mexico State U .....	9,360	7,370	2,200	1,797i	8,865	454	0	41
26 SUNY Stony Brook .....	8,830	7,197	6,816	6,018	1,529	2,703	4,598	0
27 University of IL Urbana .....	8,295	6,152	5,712	6,054	1,498	5,554	0	1,243
28 Utah State University .....	8,242	4,470	5,607	4,998	7,221	1,021	0	0
29 University Hawaii Manoa .....	7,330	14,473	15,095	15,393	0	5,462	1,504	364
30 University of Arizona .....	7,266	6,695	4,964	6,644	814	2,823	0	3,629
Total, 1st 30 insts. ....	611,071	558,863	490,423	465,482	117,637	143,789	260,240	89,405
31 U CA Santa Barbara .....	7,145	7,290	7,036	7,029	0	2,000	5,145	0
32 Louisiana State U System .....	7,085	7,099	5,829	5,975	0	1,836	4,824	425
33 U MD College Park .....	7,076	5,728	5,064	4,593	5,486	714	876	0
34 U of Nevada Las Vegas .....	6,973	5,587	4,731	4,048i	30	194	30	6,719
35 Florida State University .....	6,731	7,438	7,714	8,322	3,439	353	2,256	683
36 Harvard University .....	6,631	7,640	6,273	5,815	0	6,631	0	0
37 Col of William & Mary .....	5,998	4,428	3,788	3,346	0	15	5,983	0
38 U of NC Chapel Hill .....	5,649	3,750	3,123	2,614	0	4,403	1,246	0
39 U CA Santa Cruz .....	5,496	5,551	4,089	2,725	0	2,165	3,330	1
40 University of Virginia .....	5,474	4,940	4,208	4,670	3,306	0	2,168	0
Total, 1st 40 insts. ....	675,329	618,314	542,278	514,619	129,898	162,100	286,098	97,233
41 U MD Center for EES .....	5,413	4,321	2,857	2,379	0	0	5,223	190
42 West Virginia University .....	4,956	3,478	3,713	5,106	0	776	0	4,180
43 University of Delaware .....	4,939	4,994	4,185	3,786	0	525	4,414	0
44 Princeton University .....	4,786	4,526	4,404	3,930	2,600	2,186	0	0
45 Stanford University .....	4,745	4,052	2,888	2,236	0	3,361	1,384	0
46 NC State U Raleigh .....	4,537	3,124	3,276	2,625	0	0	1,472	3,065
47 University of Minnesota .....	4,508	4,080	2,568	2,440	0	2,612	0	1,896
48 U of NC Wilmington .....	4,426	--	--	--	0	18	4,408	0
49 Ohio State University .....	4,378	4,469	4,056	2,744	0	2,057	0	2,321
50 San Jose State University .....	4,363	2,881	2,711	2,936	714	132	3,517	0
Total, 1st 50 insts. ....	722,380	654,239	572,936	542,801	133,212	173,767	306,516	108,885

See explanatory information and SOURCE at end of table.



**Table B-55. Federally financed R&D expenditures in the environmental sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Environmental sciences total				1993 subfields			
	1993	1992	1991	1990	Atmospheric	Earth sciences	Oceanography	Other
51 University of Oklahoma .....	4,348	2,807	2,427	2,399	3,347	1,001	0	0
52 Georgia Institute of Tech .....	4,274	4,006	3,169	5,784	743	3,241	0	290
53 U of South Carolina .....	4,040	3,842	2,962	2,827	0	2,301	1,227	512
54 Brown University .....	3,976	4,183	4,204	3,961	0	0	0	3,976
55 SUNY Albany .....	3,966	3,302	3,136	4,953	3,772	194	0	0
56 University of Connecticut .....	3,803	4,093	4,762	4,341	0	226	3,577	0
57 US Naval Postgrad School ..	3,757	3,217	3,423	3,543	1,750	0	2,007	0
58 University of Wyoming .....	3,657	2,597	1,798	1,825	1,861	1,432	0	364
59 Cornell University .....	3,648	3,054	3,824	3,161	0	3,030	0	618
60 U of South Florida .....	3,525	3,352	2,961	2,785	0	218	3,307	0
Total, 1st 60 insts. ....	761,374	688,692	605,602	578,380	144,685	185,410	316,634	114,645
61 Arizona State University .....	3,500	8,403	4,922	7,073	0	3,480	0	20
62 Tufts University .....	3,466	3,375	3,397	3,737	0	0	0	3,466
63 U of Nevada Reno .....	3,300	2,432	2,044	2,467	19	2,624	0	657
64 U CA Berkeley .....	2,978	3,376	2,334	3,954	0	2,970	0	8
65 University of Chicago .....	2,959	2,201	2,309	3,728	0	2,959	0	0
66 Duke University .....	2,837	2,296	1,883	1,817	0	1,004	1,833	0
67 University of Utah .....	2,693	2,592	2,154	1,978	1,631	1,062	0	0
68 U of Maine Orono .....	2,490	2,356	3,606	2,806	0	1,513	977	0
69 Mississippi State U .....	2,387	602	699	575	0	53	0	2,334
70 Rutgers the State U NJ .....	2,323	2,509	945	710	189	345	1,242	547
Total, 1st 70 insts. ....	790,307	718,834	629,895	607,225	146,524	201,420	320,686	121,677
71 U of Alabama Huntsville .....	2,144	2,230	629	914	2,144	0	0	0
72 U MA Amherst .....	2,092	2,091	--	--	0	1,704	0	388
73 Southern Methodist U .....	2,038	2,482	3,886	6,896i	0	2,038	0	0
74 Washington University .....	1,971	1,618	1,390	1,414	0	1,971	0	0
75 University of Georgia .....	1,854	1,342	1,652	1,826	0	656	1,198	0
76 SD Sch of Mines & Tech .....	1,810	1,707	1,375	1,274	1,810	0	0	0
77 Yale University .....	1,762	1,732	1,648	1,754	810	670	211	71
78 NJ Inst of Technology .....	1,696	2,038	1,295	1,241e	0	0	0	1,696
79 Oregon Grad Inst Sci Tech ..	1,655	1,273	1,251	1,406	549	0	0	1,106
80 Wentworth Inst of Tech .....	1,634	1,287	1,460	1,435	1,634	0	0	0
Total, 1st 80 insts. ....	808,963	736,634	644,481	625,385	153,471	208,459	322,095	124,938
81 Rice University .....	1,497	1,920	1,683	2,274	0	906	0	591
82 Purdue University .....	1,480	1,467	1,546	1,331	962e	518e	0	0
83 U of PR Mayaguez .....	1,454	796i	1,024i	1,251	0	40	1,153	261
84 U of Nebraska Lincoln .....	1,361	1,483	1,771	679	1,073	288	0	0
85 U WI Superior .....	1,338	1,243	1,402	1,550	0	0	19	1,319
86 Indiana University .....	1,287	806	454	322	0	1,287	0	0
87 U CA Davis .....	1,287	858	732	996	0	1,287	0	0
88 Western Illinois U .....	1,281i	1,003i	761i	519i	88i	335i	618i	240i
89 University of New Mexico .....	1,258	895	937	802	399	859	0	0
90 University North Dakota .....	1,179	1,086	2,153	2,704	1,098	39	0	42
Total, 1st 90 insts. ....	822,385	748,191	656,944	637,813	157,091	214,018	323,885	127,391
91 Portland State University .....	1,128	157	186	267	109	86	933	0
92 NM Inst Mining & Tech .....	1,063	2,140	2,041i	1,940	0	1,063	0	0
93 U WI Milwaukee .....	1,016	1,196	1,054	1,155	0	137	879	0
94 University of Kansas .....	969	848	558	576	0	919	0	50
95 University of Oregon .....	951	2,137	2,209	2,206	0	711	240	0
96 U CA Riverside .....	944	639	758	892	0	944	0	0
97 Saginaw Valley St U .....	911	--	--	--	0	911	0	0
98 U TX El Paso .....	895	705	431	556	0	895	0	0
99 St Louis University .....	854	659	646	704	0	854	0	0
100 University of Idaho .....	853	1,028	624	998	0	521	0	332
Total, 1st 100 insts. ....	831,969	757,700	665,451	647,107	157,200	221,059	325,937	127,773
Total, all other sampled insts. ....	38,392	32,429	33,694	33,641	3,205	21,391	5,700	8,096

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-56. Total and federally financed R&D expenditures in the mathematical sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	272,133	247,487	230,104	221,676	203,004	183,048	170,479	160,856
1 Johns Hopkins U .....	34,459	27,603	29,877	33,545	34,431	27,576	29,800	33,475
2 Rutgers the State U NJ .....	7,482	9,035	8,993	8,479	3,989	5,393	5,182	4,658
3 George Washington U .....	6,856	5,955	5,898	5,552	6,548	5,712	5,590	5,161
4 MA Institute of Tech .....	6,681	3,253	2,346	2,354	5,978	2,720	2,150	2,245
5 Boston College .....	6,135	5,968	5,188	3,649	4,519	4,896	4,497	3,065
6 University of Minnesota .....	5,865	5,392	5,731	4,719	5,280	4,542	4,525	3,969
7 Princeton University .....	5,418	4,462	4,344	2,768	4,438	3,693	3,556	1,976
8 U CA Berkeley .....	5,299	4,760	4,804	3,983	4,992	4,518	4,568	3,612
9 U MD College Park .....	5,294	4,578	2,569	8,936	1,508	1,250	1,611	1,716
10 Iowa St U of Sci & Tech .....	5,083	4,743	4,547	4,082	1,701	1,785	1,594	1,465
Total, 1st 10 insts. ....	88,572	75,749	74,297	78,067	73,384	62,085	63,073	61,342
11 Brown University .....	4,582	4,905	3,617	4,260	3,136	3,487	2,820	3,823
12 NC State U Raleigh .....	3,884	4,026	3,956	3,203	1,519	1,193	1,305	1,258
13 SUNY Stony Brook .....	3,825	3,458	2,566	2,166	2,372	2,351	1,743	1,425
14 US Naval Postgrad School ..	3,702	2,042	609	401	3,692	2,028	577	401
15 U CA Los Angeles .....	3,675	3,814	3,732	3,456	3,475	3,718	3,568	3,323
16 Cornell University .....	3,599	4,192	5,903	5,819	3,166	3,607	4,509	4,557
17 U of South Carolina .....	3,528	1,270	813	979	2,601	683	607	494
18 U WI Madison .....	3,476	3,433	3,683	3,905	2,385	2,239	2,446	2,668
19 Stanford University .....	3,287	3,504	2,955	3,001	3,072	2,783	2,488	2,672
20 Purdue University .....	3,252	3,145	2,544	2,353	2,083	1,748	1,868	1,820
Total, 1st 20 insts. ....	125,382	109,538	104,675	107,610	100,885	85,922	85,004	83,783
21 Georgia Institute of Tech .....	3,245	2,162	2,244	1,365	1,816	1,215	1,288	769
22 New York University .....	3,143	3,053	3,528	4,065	2,825	2,701	3,239	3,655
23 Ohio State University .....	3,083	2,479	2,114	1,665	2,416	1,801	1,515	1,346
24 Carnegie Mellon U .....	2,861	2,917	1,822	1,766	2,147	2,339	1,560	1,499
25 Pennsylvania State U .....	2,806	2,377	2,462	2,104	1,855	1,761	1,649	1,372
26 Boston University .....	2,798	2,490	1,331	646	2,774	2,464	1,331	537
27 University of Florida .....	2,763	2,088	1,892	1,948	1,943	1,447	1,405	1,216
28 U TX MD Anderson Cnrc Ctr ..	2,653	2,476	2,483	2,358	1,013	1,078	1,012	1,047
29 Michigan State University .....	2,630	538	504	478	1,225	427	396	374
30 University of Washington .....	2,575	6,882	6,383	6,247	2,319	6,554	5,910	5,772
Total, 1st 30 insts. ....	153,939	137,000	129,438	130,252	121,218	107,709	104,309	101,370
31 Clemson University .....	2,434	1,969	1,729	1,674	721	789	449	431
32 University of IL Chicago .....	2,415	2,969	1,959	1,904	1,827	1,723	1,366	1,370
33 Rice University .....	2,337	2,049	1,508	1,349	1,841	1,962	1,482	1,309
34 University of Georgia .....	2,301	2,207	2,163	2,170	342	323	247	277
35 U MA Amherst .....	2,275	1,951	--	--	1,759	1,495	--	--
36 University of Michigan .....	2,177	3,008	3,192	2,454	2,177	1,909	1,976	1,745
37 U of Southern California .....	2,139	2,224	1,444	1,214	2,012	2,095	1,393	828
38 Harvard University .....	2,130	2,338	2,398	2,060	2,035	2,291	2,262	2,049
39 University of Chicago .....	2,092	1,946	1,872	1,913	1,993	1,769	1,652	1,541
40 University of Arizona .....	2,084	2,313	2,259	1,762	1,525	1,642	1,764	1,386
Total, 1st 40 insts. ....	176,323	159,974	147,962	146,752	137,450	123,707	116,900	112,306
41 Yale University .....	1,908	1,649	1,926	1,421	1,560	1,461	1,785	1,279
42 Indiana University .....	1,842	1,262	1,255	1,102	1,119	742	698	812
43 U CA San Diego .....	1,819	1,897	1,631	1,541	1,769	1,848	1,509	1,478
44 U of the Virgin Islands .....	1,817	968	846	0	367	179	187	0
45 University of Montana .....	1,817	485	170	23	1,562	430	116	0
46 University of IL Urbana .....	1,816	1,688	2,422	2,227	1,163	1,112	1,651	1,378
47 University of Houston .....	1,725	655	677	908	1,254	393	419	478
48 VA Polytech Inst & St U .....	1,675	1,942	1,884	2,406	774	903	906	1,176
49 University of Colorado .....	1,601	1,354	1,198	1,188	1,343	1,240	1,110	1,132
50 Oregon State University .....	1,487	1,484	1,064	847	1,060	1,106	731	448
Total, 1st 50 insts. ....	193,830	173,358	161,035	158,415	149,421	133,121	126,012	120,487

See explanatory information and SOURCE at end of table.

**Table B-56. Total and federally financed R&D expenditures in the mathematical sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
51 U CA Santa Barbara .....	1,409	1,118	882	905	816	679	455	682
52 University of Virginia .....	1,390	1,477	1,506	1,173	1,033	1,173	1,243	959
53 Texas A&M University .....	1,370	1,046	1,252	1,400	1,093	895	1,140	1,156
54 Rensselaer Polytech Inst .....	1,334	1,521	1,256	1,473	668	729	586	717
55 University of Utah .....	1,321	1,570	1,191	1,161	1,302	1,354	1,064	967
56 U of Pennsylvania .....	1,253	1,122	900	1,013	1,166	1,107	811	892
57 George Mason University ....	1,241	873	937	3	968	873	522	3
58 U TX Austin .....	1,196	1,258	1,185	890	791	910	789	645
59 Louisiana State U System .....	1,171	1,420	2,081	1,315	199	386	475	289
60 U of Alabama Huntsville .....	1,160	828	1,456	1,576	734	464	1,002	1,009
Total, 1st 60 insts. ....	206,675	185,591	173,681	169,324	158,191	141,691	134,099	127,806
61 Florida State University .....	1,122	1,528	2,160	3,405	923	1,261	1,299	1,642
62 Dartmouth College .....	1,115	789	749	459e	886	685	541	267i
63 Washington University .....	1,109	1,374	1,090	947	1,027	1,247	991	881
64 University of Connecticut .....	1,056	1,495	747	848	526	460	477	397
65 U CA Riverside .....	1,017	762	664	654	568	421	349	324
66 Duke University .....	992	846	636	597	899	761	530	502
67 U of NC Chapel Hill .....	991	1,479	1,600	1,328	929	1,241	1,424	1,233
68 Colorado State University ....	970	748	503	626	401	615	336	448
69 U of Tennessee System .....	966	1,011	829	666	638	552	349	333
70 Loyola U of Chicago .....	959	1,087	431	101	824	1,023	431	55
Total, 1st 70 insts. ....	216,972	196,710	183,090	178,955	165,812	149,957	140,826	133,888
71 Arizona State University .....	953	999	1,135	728	618	667	580	461
72 Colorado School of Mines ....	925	736	845	724	400	296	503	518
73 University of Oklahoma .....	889	1,028	982	857	246	165	234	232
74 Western Michigan U .....	889	224	182	231	617	130	67	64
75 U Arkansas Fayetteville .....	886	902	1,008	893	127	171	178	213
76 Clark Atlanta University .....	883	841	0	43i	814	775	0	43i
77 United States Naval Acad .....	853	822i	709i	592i	793	774i	672i	567i
78 California Inst of Tech .....	840	853	926	849	830	841	915	836
79 Clarkson University .....	805	445	436	416	635	396	393	373
80 University of Pittsburgh .....	805	787	817	797	659	658	727	582
Total, 1st 80 insts. ....	225,700	204,347	190,130	185,085	171,551	154,830	145,095	137,777
81 Albany State College .....	800	401	0	0	291	0	0	0
82 U of Iowa .....	797	730	882	782	641	523	609	402
83 KS St U Agri & App Sci .....	770	763	476	512	176	143	71	169
84 Northwestern University .....	764	777	855	973	702	721	642	766
85 Wesleyan University .....	732i	666i	546i	648i	536i	531i	95i	127i
86 The University of Alabama .....	722	730	787	761	56	10	39	60
87 University of New Mexico .....	705	357	232	243	575	289	150	118
88 Columbia U Main Division .....	699	980	970	1,043	669	980	941	1,042
89 University of Kentucky .....	672	567	345	373	576	541	315	334
90 Northeastern University .....	646	492	376	353	645	492	271i	352
Total, 1st 90 insts. ....	233,007	210,810	195,599	190,773	176,418	159,060	148,228	141,147
91 University of Dayton .....	635	1,080	1,107	692	620	1,071	1,082	637
92 Kent State University .....	625	402	559	498	411	337	316	396
93 CUNY City College .....	624	309	161	192	616	309	161	192
94 University of Akron .....	618	726	528	347	446	446	287	254
95 University of Delaware .....	612	654	573	548	518	564	445	415
96 Brandeis University .....	609	533	580	591	582	500	526	535
97 Washington State U .....	577	606	520	504	414	416	295	339
98 Hofstra University .....	563	15	25	29	563	15	25	29
99 U CA Davis .....	562	474	621	499	501	438	472	426
100 U of Southwestern LA .....	557	593	529	426	12	0	9	30
Total, 1st 100 insts. ....	238,989	216,202	200,802	195,099	181,101	163,156	151,846	144,400
Total, all other sampled insts. ....	33,144	31,285	29,302	26,577	21,903	19,892	18,633	16,456

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-57. Total and federally financed R&D expenditures in the computer sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	597,339	555,895	554,316	514,623	421,635	379,748	371,525	342,285
1 Johns Hopkins U .....	72,957	59,217	57,525	63,497	72,521	59,003	57,397	63,383
2 Carnegie Mellon U .....	53,788	48,123	45,090	44,808	42,346	36,311	33,342	33,951
3 U of Southern California .....	34,948	33,525	32,816	30,718	32,275	30,763	30,476	27,705
4 Cornell University .....	28,331	23,043	21,291	21,327	20,887	18,967	17,450	17,457
5 Georgia Institute of Tech .....	20,754	18,309	17,077	15,295	11,611	10,288	9,805	8,624
6 University of Michigan .....	19,678	21,469	10,453	7,688	12,949	13,865	6,347	2,941
7 University of IL Urbana .....	17,192	19,575	18,067	17,457	8,770	9,733	8,836	9,184
8 U TX Austin .....	14,252	13,096	14,460	9,653	6,854	5,778	5,172	1,852
9 MA Institute of Tech .....	13,707	13,153	13,617	12,343	10,213	9,472	9,167	8,858
10 University of Minnesota .....	11,302	12,999	25,186	11,721	8,590	10,631	22,705	8,584
Total, 1st 10 insts. ....	286,909	262,509	255,582	234,507	227,016	204,811	200,697	182,539
11 Stanford University .....	10,104	9,843	9,016	10,582	9,194	7,519	7,278	9,247
12 U MA Amherst .....	9,984	7,974	--	--	5,645	5,359	--	--
13 U MD College Park .....	9,404	8,218	6,569	9,240	3,891	3,441	3,423	2,875
14 U CA San Diego .....	9,115	8,902	8,170	7,202	5,916	4,848	3,693	2,985
15 U of Tennessee System .....	8,445	9,015	6,130	2,655	6,232	7,014	4,037	1,427
16 New York University .....	7,965	7,809	7,029	6,903	7,566	6,753	6,092	6,286
17 U of NC Chapel Hill .....	7,658	7,707	7,569	6,636	4,759	4,112	4,492	4,187
18 University of Utah .....	7,487	6,333	3,500	2,896	6,414	5,119	2,386	1,804
19 SUNY Buffalo .....	7,099	6,258	4,199	3,128	5,840	5,274	3,238	1,986
20 Rice University .....	7,049	7,270	8,753	5,369	5,440	5,281	7,222	5,046
Total, 1st 20 insts. ....	371,219	341,838	316,517	289,118	287,913	259,531	242,558	218,382
21 U of Pennsylvania .....	6,883	6,572	6,904	7,970	5,351	5,572	6,139	6,114
22 Ohio State University .....	6,789	6,857	7,076	5,658	1,172	1,340	974	843
23 Syracuse University .....	6,569	9,847	9,379	10,351	2,230	2,412	2,299	5,211
24 West Virginia University .....	6,172	5,969	9,829	10,211	4,307	2,681	128	359
25 California Inst of Tech .....	6,161	4,676	4,793	3,347	5,674	4,331	4,091	2,542
26 Worcester Polytech Inst .....	5,743	2,825	289	170	5,682	2,538	96	105
27 Iowa St U of Sci & Tech .....	5,217	6,116	9,245	4,232	411	1,881	5,076	80
28 U WI Madison .....	5,171	4,993	4,454	3,966	3,883	3,652	3,146	2,979
29 Brown University .....	5,050	4,084	3,686	5,029	3,477	2,614	1,600	2,316
30 University of Georgia .....	4,938	3,836	3,908	3,383	1,370	1,644	2,035	1,802
Total, 1st 30 insts. ....	429,912	397,613	376,080	343,435	321,470	288,196	268,142	240,733
31 U of Southwestern LA .....	4,743	3,767	2,873	2,507	175	440	399	255
32 University of Colorado .....	4,722	2,754	4,027	3,010	2,378	1,774	2,692	2,282
33 Oregon Grad Inst Sci Tech ..	4,515	2,409	1,888	1,672	2,439	1,651	1,478	1,577
34 Washington University .....	4,437	5,358	4,833	4,361	3,491	3,407	2,385	2,591
35 Yale University .....	4,230	4,172	3,402	5,899	3,957	3,718	2,937	5,045
36 Northwestern University .....	4,164	4,171	3,374	2,043	3,294	2,584	1,604	636
37 U CA Santa Barbara .....	4,122	3,387	2,558	1,591	3,157	2,666	1,974	1,206
38 U CA Irvine .....	4,032	3,803	3,820	3,863	3,194	3,042	2,814	3,140
39 University of Arizona .....	3,993	2,945	2,919	2,496	2,422	1,587	1,740	1,724
40 Rutgers the State U NJ .....	3,986	4,566	4,298	4,310	1,725	1,707	1,704	1,731
Total, 1st 40 insts. ....	472,856	434,945	410,072	375,187	347,702	310,772	287,869	260,920
41 U CA Los Angeles .....	3,755	3,902	3,608	3,938	3,003	3,080	2,273	2,618
42 University of Washington .....	3,596	2,942	2,250	2,936	3,443	2,698	2,082	2,777
43 Texas A&M University .....	3,496	3,694	5,047	4,075	1,233	1,337	1,440	1,787
44 U of Alabama Huntsville .....	3,405	2,743	2,789	2,738	2,110	1,745	1,805	1,558
45 Princeton University .....	3,331	3,184	3,759	4,293	1,758	1,736	2,371	2,842
46 University of Oklahoma .....	3,287	3,969	4,252	1,587	2,127	2,438	2,610	522
47 Columbia U Main Division .....	3,188	3,338	3,936	3,419	2,402	2,456	3,108	2,523
48 New Mexico State U .....	3,120	2,771	8,357	9,658	2,287	2,398	6,388	8,590
49 University of Virginia .....	2,936	2,715	2,769	2,729	2,141	1,897	2,027	2,132
50 Purdue University .....	2,706	3,393	3,353	3,033	1,838	2,376	2,569	2,375
Total, 1st 50 insts. ....	505,676	467,596	450,192	413,593	370,044	332,933	314,542	288,644

See explanatory information and SOURCE at end of table.

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**Table B-57. Total and federally financed R&D expenditures in the computer sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
51 US Naval Postgrad School ..	2,620	2,878	1,421	1,243	2,595	2,878	1,421	1,234
52 University of Florida .....	2,616	2,792	2,387	2,533	1,364	1,377	1,275	1,207
53 University of Delaware .....	2,385	1,663	1,448	1,340	1,760	1,224	1,129	1,033
54 University of Rochester .....	2,318	1,826	1,521	1,897	2,172	1,674	1,402	1,725
55 Duke University .....	2,273	1,455	1,760	2,099	1,993	990	1,264	1,786
56 University of Connecticut .....	2,089	2,196	1,807	1,747	292	0	116	148
57 U CA Berkeley .....	2,021	2,183	1,651	1,331	538	491	491	287
58 U of Nevada Las Vegas .....	1,914	1,413	11,141	7,134 i	1,203	694	11,133	7,131 i
59 U of Houston Clear Lake .....	1,882	3,103 i	2,882 i	2,662 i	1,844	2,951 i	2,732 i	2,513 i
60 Harvard University .....	1,833	388	1,355	1,849	1,767	281	1,071	1,532
Total, 1st 60 insts. ....	527,627	487,493	477,565	437,428	385,572	345,493	336,576	307,240
61 Wright State University .....	1,768	1,500	975	1,028	282	279	603	662
62 Sthrn IL U Carbondale .....	1,743	1,722	2,214	1,977	12	21	30	0
63 Pennsylvania State U .....	1,689	1,755	1,408	1,449	899	707	734	837
64 Northeastern University .....	1,590	1,405	1,318	824	1,543	1,367	951 i	778
65 SUNY Stony Brook .....	1,570	2,019	1,570	1,501	917	1,376	1,045	1,137
66 Rensselaer Polytech Inst .....	1,545	1,425	1,593	2,185	774	682	743	1,063
67 Florida Atlantic U .....	1,467	854	776	51	48	64	88	0
68 University of Chicago .....	1,445	1,316	956	1,009	1,316	1,266	941	970
69 George Mason University .....	1,429	2,410	1,376	688	1,036	2,220	1,135	255
70 Clemson University .....	1,422	1,644	4,691	5,018	422	482	696	661
Total, 1st 70 insts. ....	543,295	503,543	494,442	453,158	392,821	353,957	343,542	313,603
71 San Diego St University .....	1,373	1,572	1,449	1,396	812	836	893	1,004
72 University of Pittsburgh .....	1,368	1,041	1,055	876	1,142	828	537	554
73 Indiana University .....	1,327	848	1,259	1,600	858	590	889	1,313
74 U TX El Paso .....	1,271	725	427	311	678	638	422	299
75 University of New Mexico .....	1,196	679	394	319	138	151	69	0
76 Air Force Inst of Tech .....	1,169	1,305	699	634	1,169	1,305	699	634
77 U CA Santa Cruz .....	1,154	916	712	493	1,111	859	468	349
78 Southern U All Campuses .....	1,114	1,175	849	596 i	1,102	1,062	749	469 i
79 U TX Arlington .....	1,085	859	850	460	116	136	152	100
80 Georgetown University .....	1,078	983	980	1,114	798	738	798	856
Total, 1st 80 insts. ....	555,430	513,646	503,116	460,957	400,745	361,100	349,218	319,181
81 Arizona State University .....	1,062	1,629	1,133	1,436	557	472	619	561
82 U of Nebraska Lincoln .....	1,053	1,060	1,177	1,140	380	391	506	388
83 NC State U Raleigh .....	1,018	1,306	1,858	1,570	625	636	922	825
84 Clark Atlanta University .....	1,017	969	0	44 i	868	827	0	44 i
85 U of Central Florida .....	929	695	724	671	761	514	497	388
86 University of North Texas .....	928	593	1,404	537	113	82	56	16
87 University Hawaii Manoa .....	928	860	198	798	911	720	175	793
88 VA Polytech Inst & St U .....	919	779	736	1,032	682	386	297	342
89 University of Oregon .....	879	731	518	563	659	331	336	470
90 Oregon State University .....	873	920	937	858	373	358	347	289
Total, 1st 90 insts. ....	565,036	523,188	511,801	469,606	406,674	365,817	352,973	323,297
91 Texas Tech University .....	849	681	527	546	276	94	8	0
92 U of Missouri Kansas City .....	838	921	1,289	1,439	0	0	0	0
93 Howard University .....	804	0	2,369	39 i	788	0	2,030	32 i
94 Drexel University .....	749	766	169	324	359	128	5	50
95 Rockefeller University .....	728	691	276	585	0	0	0	0
96 CA St U Chico .....	657	450 i	368 i	288 i	26	19 i	15 i	11 i
97 SUNY Binghamton .....	643	224	220	288	175	52	19	24
98 Old Dominion University .....	631	797	755	839	444	577	499	617
99 Wayne State University .....	616	885	851	209	238	193	40	16
100 University of Kentucky .....	594	394	253	215	417	294	196	170
Total, 1st 100 insts. ....	572,145	528,997	518,878	474,378	409,397	367,174	355,785	324,217
Total, all other sampled insts. ....	25,194	26,898	35,438	40,245	12,238	12,574	15,740	18,068

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-58. R&D expenditures in the life sciences  
at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Life sciences total				1993 subfields			
	1993	1992	1991	1990	Agri- cultural sciences	Bio- logical sciences	Medical sciences	Other
Total, all institutions .....	10,827,725	10,183,491	9,470,794	8,725,124	1,558,090	3,536,452	5,285,269	447,914
1 U CA San Francisco .....	314,599	295,784	268,700	238,278	0	0	314,599	0
2 Johns Hopkins U .....	249,430	226,247	222,541	208,607	0	61,227	147,233	40,970
3 University of Minnesota .....	236,421	224,221	222,512	204,590	59,265	44,563	126,164	6,429
4 University of Washington .....	216,655	192,469	172,710	152,755	7,547	85,386	107,340	16,382
5 U WI Madison .....	212,123	202,187	187,200	178,337	27,119	66,151	114,432	4,421
6 University of Michigan .....	203,823	195,922	191,582	162,379	148	64,509	123,114	16,052
7 U CA Davis .....	193,843	183,504	178,466	177,754	99,428	34,495	59,920	0
8 Yale University .....	180,991	167,790	153,527	143,093	1,116	64,733	115,142	0
9 U CA Los Angeles .....	178,798	170,979	157,174	157,626	1	19,356	156,060	3,381
10 Baylor Col of Medicine .....	172,252	167,998	161,084	155,122	0	86,442	85,810	0
Total, 1st 10 insts. ....	2,158,935	2,027,101	1,915,496	1,778,541	194,624	526,862	1,349,814	87,635
11 Cornell University .....	171,569	163,950	171,008	166,595	39,002	43,045	89,522	0
12 U of Pennsylvania .....	167,039	158,321	143,981	132,599	0	36,059	130,980	0
13 Harvard University .....	159,744	157,253	144,264	136,522	53	78,057	81,634	0
14 Duke University .....	158,918	151,282	133,314	111,309	2,632	35,441	118,024	2,821
15 Washington University .....	157,620	149,515	141,528	133,337	0	66,816	88,023	2,781
16 U CA San Diego .....	153,495	141,979	129,711	111,314	0	13,701	139,794	0
17 University of Pittsburgh .....	145,177	127,935	104,112	90,285	0	2,156	117,483	25,538
18 Stanford University .....	142,057	155,678	138,735	136,087	0	10,030	131,734	293
19 U of NC Chapel Hill .....	133,978	120,223	107,075	92,270	0	62,353	61,657	9,968
20 Columbia U Main Division .....	132,312	127,113	119,235	113,392	0	55,257	76,947	108
Total, 1st 20 insts. ....	3,680,844	3,480,350	3,248,459	3,002,251	236,311	929,777	2,385,612	129,144
21 Texas A&M University .....	129,639	122,997	111,045	106,885	49,598	73,299	6,651	91
22 U of Alabama Birmingham .....	125,857	111,432	106,472	104,185	0	45,018	79,622	1,217
23 U TX MD Anderson Cntr Ctr .....	121,998	105,873	102,322	84,819	0	52,798	69,200	0
24 University of Georgia .....	120,779	116,753	114,576	111,742	57,269	48,993	14,517	0
25 U CA Berkeley .....	114,359	118,846	104,359	87,951	47,751	37,718	28,820	70
26 U TX SW Med Ctr Dallas .....	114,258	102,263	94,511	85,919	0	48,994	65,264	0
27 Ohio State University .....	114,193	106,349	97,522	89,335	28,036	35,365	43,904	6,888
28 U MD Baltimore Prof Sch .....	111,772	100,312	100,163	83,689	0	16,766	89,418	5,588
29 University of Arizona .....	110,620	105,187	97,583	82,443	32,499	32,776	40,191	5,154
30 U of Iowa .....	107,808	94,968	86,388	82,386	0	23,652	82,494	1,662
Total, 1st 30 insts. ....	4,852,127	4,565,330	4,263,400	3,921,605	451,464	1,345,156	2,905,693	149,814
31 Emory University .....	106,481	89,463	82,778	74,880	0	25,281	61,167	20,033
32 U of Southern California .....	103,156	95,233	87,695	83,856	0	5,416	89,936	7,804
33 New York University .....	99,503	95,774	87,436	84,854	0	35,480	48,600	15,423
34 Louisiana State U System .....	95,758	90,969	80,166	83,104	40,713	35,506	15,947	3,592
35 Pennsylvania State U .....	92,148	90,125	86,055	83,743	35,739	37,041	16,141	3,227
36 University of Colorado .....	91,032	84,498	75,074	75,398	0	23,348	63,634	4,050
37 University of Rochester .....	89,730	87,647	89,004	85,078	0	32,681	52,082	4,967
38 Yeshiva University .....	89,636	87,196	86,721	83,968	0	23,305	46,610	19,721
39 Case Western Reserve U .....	89,427	82,364	71,887	60,411e	0	55,217	34,210	0
40 University of Florida .....	85,540	87,227	83,456	81,616	20,807	24,506	35,991	4,236
Total, 1st 40 insts. ....	5,794,538	5,455,826	5,093,672	4,718,513	548,723	1,642,937	3,370,011	232,867
41 Michigan State University .....	84,705	81,787	76,581	73,035	33,694	34,609	15,360	1,042
42 University of Miami .....	83,633	71,815	70,868	68,395	0	16,285	67,274	74
43 NC State U Raleigh .....	81,135	76,021	73,215	71,258	42,047	38,290	0	798
44 SUNY Buffalo .....	80,868	76,580	69,283	66,568	0	39,347	38,666	2,855
45 University of IL Chicago .....	79,538	75,258	64,725	59,462	0	22,229	48,497	8,812
46 Iowa St U of Sci & Tech .....	79,053	71,224	62,329	65,403	33,996	33,355	6,195	5,507
47 University of Connecticut .....	76,948	73,136	75,544	73,863	6,980	26,696	42,778	494
48 U Med & Dent NJ .....	76,410	84,505	80,787	71,789	0	28,894	47,516	0
49 Northwestern University .....	75,472	70,979	79,551	74,268	0	32,257	39,300	3,915
50 CUNY Mt Sinai Sch of Med .....	75,337	75,561	66,310	63,752	0	17,195	58,142	0
Total, 1st 50 insts. ....	6,587,637	6,212,692	5,812,865	5,406,306	665,440	1,932,094	3,733,739	256,364

See explanatory information and SOURCE at end of table.



**Table B-58. R&D expenditures in the life sciences  
at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Life sciences total				1993 subfields			
	1993	1992	1991	1990	Agri- cultural sciences	Bio- logical sciences	Medical sciences	Other
51 U TX Hlth Sci Ctr San Ant .....	75,239	65,179	51,768	45,663	0	20,739	54,500	0
52 Indiana University .....	75,107	69,349	62,685	55,502	0	22,635	49,958	2,514
53 U of Missouri Columbia .....	74,708	71,032	72,022	66,038	30,402	27,773	16,319	214
54 Vanderbilt University .....	74,218	75,026	59,736	57,246	0	38,220	29,558	6,440
55 Purdue University .....	74,151	69,657	70,314	66,601	24,519	37,163	10,737	1,732
56 Rutgers the State U NJ .....	73,650	69,760	64,588	59,183	22,446	35,594	13,123	2,487
57 University of Kentucky .....	72,789	65,787	58,612	51,789	33,959	1,220	34,709	2,901
58 University of Chicago .....	72,595	79,388	77,696	79,769	0	26,240	45,345	1,010
59 U of Tennessee System .....	71,803	64,084	63,634	60,690	25,290	19,434	24,091	2,988
60 Virginia Commonwealth U .....	71,270	64,331	61,605	58,528	0	25,135	44,896	1,239
Total, 1st 60 insts. ....	7,323,167	6,906,285	6,455,525	6,007,315	802,056	2,186,247	4,056,975	277,889
61 Oregon State University .....	68,080	62,669	57,612	51,442	35,740	19,850	2,437	10,053
62 U TX Med Br Galveston .....	67,998	57,672	45,086	40,610	0	18,699	28,087	21,212
63 U of Nebraska Lincoln .....	67,964	60,593	59,898	55,349	51,431	12,824	3,698	11
64 Rockefeller University .....	67,277	67,004	64,552	62,718	0	60,971	6,306	0
65 U CA Irvine .....	66,886	59,902	55,419	53,261	0	36,480	30,406	0
66 University of Virginia .....	66,704	60,441	50,807	51,023	0	24,839	41,246	619
67 University of Utah .....	65,207	69,005	60,708	55,460	0	24,737	38,272	2,198
68 University of Cincinnati .....	64,906	62,226	54,707	51,495	0	36,636	28,270	0
69 Boston University .....	63,741	58,315	53,665	54,067	0	3,215	59,123	1,403
70 Georgetown University .....	63,357	54,878	50,375	41,120	0	15,521	47,836	0
Total, 1st 70 insts. ....	7,985,287	7,518,990	7,008,354	6,523,860	889,227	2,440,019	4,342,656	313,385
71 U MD College Park .....	63,254	62,624	72,859	19,554	28,262	31,184	0	3,808
72 Wayne State University .....	62,874	56,634	49,221	43,871	0	819	56,654	5,401
73 U TX Hlth Sci Ctr Houston .....	58,178	54,665	53,402	44,345	0	14,302	41,632	2,244
74 Washington State U .....	58,054	56,626	51,727	46,456	25,488	27,065	2,562	2,939
75 Colorado State University .....	57,825	52,626	39,548	36,345	26,801	21,437	8,882	705
76 Tulane University .....	57,770	53,194	55,581	46,411	0	6,449	28,131	23,190
77 SUNY Stony Brook .....	56,711	52,657	46,642	40,081	0	30,221	26,424	66
78 Wake Forest University .....	56,478	48,901	43,223	38,636	0	307	56,171	0
79 Oregon Health Sciences U .....	54,978	47,684	40,272	40,070	0	14,622	38,109	2,247
80 University of IL Urbana .....	54,529	58,097	51,838	49,898	30,586	21,275	2,668	0
Total, 1st 80 insts. ....	8,565,938	8,062,698	7,512,667	6,929,527	1,000,364	2,607,700	4,603,889	353,985
81 U MA Worcester .....	54,277	53,342	--	--	0	23,311	30,966	0
82 Thomas Jefferson U .....	51,106	41,329	33,066	30,969	0	27,164	22,766	1,176
83 VA Polytech Inst & St U .....	51,095	51,855	52,164	52,477	38,493	9,028	2,523	1,051
84 U of South Florida .....	50,539	42,200	44,554	40,589	0	1,232	49,067	240
85 University of Kansas .....	49,786	42,582	37,315	32,597	49	29,044	15,332	5,361
86 U CA Riverside .....	49,153	49,488	49,362	47,431	43,090	4,247	1,816	0
87 Medical Col of Wisconsin .....	48,689	43,579	40,446	34,622	0	16,067	32,622	0
88 Dartmouth College .....	47,169	43,070	35,637	33,439	0	2,101	44,908	160
89 Tufts University .....	46,187	40,966	38,493	37,300	0	39,489	5,468	1,230
90 U of VT & State Agri Col .....	45,726	45,533	42,285	41,009	6,109	17,920	19,867	1,830
Total, 1st 90 insts. ....	9,059,665	8,516,642	7,885,989	7,279,960	1,088,105	2,777,303	4,829,224	365,033
91 KS St U Agri & App Sci .....	44,871	41,541	39,863	37,289	33,209	10,762	900	0
92 Med U of South Carolina .....	42,543	31,900	25,877	23,128	0	12,866	25,963	3,714
93 University of Oklahoma .....	40,577	40,591	34,302	27,424	0	15,057	17,033	8,487
94 Mississippi State U .....	40,198	36,247	36,510	36,357	36,674	2,630	894	0
95 Auburn University .....	40,054	40,989	40,774	40,638	27,648	7,909	3,354	1,143
96 Oklahoma State University .....	38,176	38,613	34,743	32,289	23,219	9,228	5,179	550
97 U Arkansas Fayetteville .....	37,500	26,812	24,756	22,032	35,160	2,340	0	0
98 Clemson University .....	37,009	37,240	34,752	34,611	23,966	10,192	417	2,434
99 Temple University .....	36,321	34,144	38,985	37,121	0	18,955	17,336	30
100 MA Institute of Tech .....	35,792	38,101	34,398	37,711	0	35,792	0	0
Total, 1st 100 insts. ....	9,452,706	8,882,820	8,230,949	7,608,560	1,267,981	2,903,034	4,900,300	381,391

See explanatory information and SOURCE at end of table.



**Table B-58. R&D expenditures in the life sciences  
at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Life sciences total				1993 subfields			
	1993	1992	1991	1990	Agri- cultural sciences	Bio- logical sciences	Medical sciences	Other
101 University of Idaho .....	32,440	29,427	24,828	22,172	29,578	2,431	431	0
102 U of NE Med Ctr Omaha .....	31,669	31,564	27,858	17,844	0	19,797	11,872	0
103 Unif Svcs U of Hlth Sci .....	30,846	27,875i	24,904i	21,933i	0	6,977	23,869	0
104 Rush University .....	29,897	24,000	25,341	20,363	0	6,057	21,686	2,154
105 University Hawaii Manoa .....	29,276	28,153	27,060	22,662	10,464	10,123	1,589	7,100
106 SUNY Hlth Sci Ctr Brklyn .....	27,645	24,171	32,824	22,873	0	8,171	19,140	334
107 Loyola U of Chicago .....	25,291	27,683	21,229	10,236	0	6,180	14,581	4,530
108 The Medical Col of PA .....	24,996	25,835	24,645	18,643	0	14,152	10,844	0
109 Medical Col of Georgia .....	24,935	21,426	12,082	12,052	0	15,839	8,866	230
110 West Virginia University .....	24,915	25,486	23,283	21,707	13,829	3,630	7,449	7
Total, 1st 110 insts. ....	9,734,616	9,148,440	8,475,003	7,799,045	1,321,852	2,996,391	5,020,627	395,746
111 North Dakota State U .....	24,543	24,045	19,130	7,865	17,433	6,815	216	79
112 Utah State University .....	23,112	23,233	22,247	21,760	15,657	5,515	1,940	0
113 University of New Mexico .....	22,264	26,294	29,881	27,115	0	13,650	8,607	7
114 Montana State University .....	22,132	22,634	20,272	18,593	16,241	5,322	0	569
115 California Inst of Tech .....	21,982	24,954	26,275	24,857	0	21,982	0	0
116 U TX Austin .....	20,830	19,472	18,726	19,785	0	13,032	5,257	2,541
117 New Mexico State U .....	20,763	20,452	18,183	19,797i	13,970	6,745	48	0
118 Brown University .....	20,632	19,652	17,979	17,654	0	2,227	15,830	2,575
119 St Louis University .....	19,686	19,222	18,493	16,083	0	9,766	10,120	0
120 SUNY Albany .....	19,869	19,373	2,844	2,928	0	19,869	0	0
Total, 1st 120 insts. ....	9,950,629	9,367,771	8,669,033	7,975,482	1,385,153	3,101,314	5,062,645	401,517
121 New York Medical College ...	18,491i	16,799	14,633	13,244	0i	11,789i	6,702i	0
122 Texas Tech University .....	18,227	18,149	17,260	15,814	7,913	4,741	5,534	39
123 Princeton University .....	17,767	16,684	18,513	17,597	0	17,767	0	0
124 Hahnemann University .....	17,756	18,203	13,169	12,134	0	12,492	5,092	172
125 U of PR Med Sci Campus ...	17,574	18,296	11,014	6,293	0	0	17,574	0
126 U MA Amherst .....	17,123	16,837	--	--	8,857	6,042	0	2,224
127 Florida A&M University .....	17,120i	16,698	13,686	7,539e	8,354i	7,896i	311i	559
128 Brandeis University .....	16,766	16,177	15,608	14,303	0	16,766	0	0
129 University of Wyoming .....	16,679	13,987	12,558	12,216	9,961	5,954	764	0
130 U of South Carolina .....	16,307	15,603	15,674	15,119	0	4,937	8,764	2,606
Total, 1st 130 insts. ....	10,124,439	9,535,204	8,801,148	8,089,741	1,420,238	3,189,698	5,107,386	407,117
131 San Diego St University .....	15,836	13,414	12,518	9,086	3,151	7,471	4,769	445
132 George Washington U .....	15,828	17,910	16,988	19,240	0	4,308	10,328	1,192
133 Eastern Virginia Med Sch .....	15,818	11,238	11,112	10,496	0	4,610	11,208	0
134 U of Nevada Reno .....	15,775	16,328	11,816	11,364	5,095	8,990	859	831
135 U Arkansas Med Sci .....	15,686	15,889	14,250	11,898	0	6,064	9,622	0
136 University of Mississippi .....	15,000	14,250	15,195	14,649	0	5,738	9,262	0
137 U of Alaska Fairbanks .....	14,797i	16,880	16,908	17,454	6,466i	8,331i	0i	0
138 University of Louisville .....	14,320	12,968	12,762	12,027	0	4,987	7,499	1,834
139 U of Maine Orono .....	14,214	12,443	15,586	13,779	7,643	6,571	0	0
140 Carnegie Mellon U .....	13,916	12,957	12,568	11,400	0	7,683	0	6,233
Total, 1st 140 insts. ....	10,275,629	9,679,481	8,940,851	8,221,134	1,442,593	3,254,451	5,160,933	417,652
141 U of PR Mayaguez .....	13,835	22,800i	24,985i	27,165	13,449	378	8	0
142 SUNY Hlth Sci Ctr Syracuse .....	13,514	13,896	14,564	14,401	0	8,426	5,088	0
143 Strn IL U Carbondale .....	12,598	12,708	12,578	12,853	3,664	3,029	5,555	350
144 Wright State University .....	11,994	9,346	7,696	6,803	0	2,332	9,451	211
145 Med Col of Ohio Toledo .....	11,881	10,905	9,353	7,159	0	8,259	3,622	0
146 Albany Medical College .....	11,845	9,681	10,131	9,431	0	7,285	4,560	0
147 University of Delaware .....	11,402	11,595	10,762	9,093	10,418	806	0	178
148 South Dakota State U .....	11,113	9,900	9,138	7,699	8,245	2,138	175	555
149 SUNY Col Env Sci & Frstry ..	10,918	9,189	7,892	7,940	3,129	7,789	0	0
150 U of South Alabama .....	10,848	10,789	11,205	10,229	16	8,715	1,928	189
Total, 1st 150 insts. ....	10,395,577	9,800,290	9,059,155	8,333,907	1,481,514	3,303,608	5,191,320	419,135
Total, all other sampled insts. ....	432,148	383,201	411,639	391,217	76,576	232,844	93,949	28,779

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-59. Federally financed R&D expenditures in the life sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Life sciences total				1993 subfields			
	1993	1992	1991	1990	Agri-cultural sciences	Bio-logical sciences	Medical sciences	Other
Total, all institutions .....	6,382,815	5,908,436	5,416,872	5,082,075	449,710	2,312,449	3,351,137	269,519
1 U CA San Francisco .....	210,148	202,283	190,936	175,257	0	0	210,148	0
2 Johns Hopkins U .....	204,479	184,460	177,528	163,223	0	48,554	121,895	34,030
3 University of Washington .....	173,393	157,375	137,829	125,284	4,640	72,981	83,030	12,742
4 Yale University .....	136,069	125,966	119,459	116,188	411	50,540	85,118	0
5 University of Michigan .....	126,885	118,810	117,241	103,528	139	43,227	74,442	9,077
6 U of Pennsylvania .....	126,296	115,035	107,024	96,957	0	29,776	96,520	0
7 U CA San Diego .....	126,016	116,557	105,192	90,706	0	12,315	113,701	0
8 Harvard University .....	123,020	119,764	105,772	102,593	11	65,549	57,460	0
9 U CA Los Angeles .....	121,961	113,800	105,228	104,102	0	15,208	104,672	2,081
10 University of Minnesota .....	118,145	112,873	102,774	97,634	10,745	26,412	76,825	4,163
Total, 1st 10 insts. ....	1,466,412	1,366,923	1,268,983	1,175,472	15,946	364,562	1,023,811	62,093
11 University of Pittsburgh .....	117,065	101,585	82,844	72,720	0	998	96,538	19,529
12 Columbia U Main Division .....	116,106	108,904	99,324	97,783	0	49,074	67,032	0
13 Stanford University .....	113,245	107,453	102,844	111,727	0	8,362	104,675	208
14 Washington University .....	113,093	108,721	99,744	93,531	0	49,576	61,646	1,871
15 U WI Madison .....	108,025	103,548	95,697	93,184	9,016	35,629	61,306	2,074
16 Duke University .....	101,794	97,305	92,290	84,358	1,116	28,873	69,746	2,059
17 U of NC Chapel Hill .....	99,994	88,104	81,066	72,374	0	47,640	46,863	5,491
18 Cornell University .....	94,826	86,116	84,208	84,922	11,462	25,505	57,859	0
19 U of Alabama Birmingham .....	92,246	80,614	74,489	72,524	0	31,493	59,854	899
20 Baylor Col of Medicine .....	87,623	85,734	78,752	75,793	0	57,104	30,519	0
Total, 1st 20 insts. ....	2,510,429	2,335,007	2,160,241	2,034,388	37,540	698,816	1,679,849	94,224
21 U CA Davis .....	86,415	74,989	65,716	64,036	29,917	15,601	40,897	0
22 Emory University .....	73,674	63,043	55,188	47,700	0	20,961	36,484	16,229
23 New York University .....	72,187	69,611	64,335	63,771	0	26,584	33,420	12,183
24 Yeshiva University .....	71,771	68,152	67,831	65,066	0	18,644	37,288	15,839
25 U of Iowa .....	70,492	63,937	59,198	58,187	0	17,720	52,666	106
26 U of Southern California .....	70,287	60,191	58,538	57,813	0	4,796	59,388	6,103
27 Case Western Reserve U .....	69,872	62,411	55,712	50,890	0	43,562	26,310	0
28 University of Colorado .....	69,804	63,928	56,353	54,616	0	18,129	49,265	2,410
29 University of Rochester .....	68,701	66,543	71,086	69,149	0	28,574	36,860	3,267
30 U TX SW Med Ctr Dallas .....	67,943	61,499	57,746	54,965	0	31,591	36,352	0
Total, 1st 30 insts. ....	3,231,575	2,989,311	2,771,944	2,620,581	67,457	924,978	2,088,779	150,361
31 Vanderbilt University .....	66,346	62,685	54,887	52,674	0	34,147	26,467	5,732
32 University of Chicago .....	61,439	65,435	64,241	64,416	0	23,135	37,307	997
33 SUNY Buffalo .....	59,368	57,144	50,923	49,673	0	33,449	24,021	1,898
34 University of Miami .....	58,196	53,692	48,164	47,724	0	13,831	44,321	44
35 Ohio State University .....	57,418	49,873	45,090	42,490	7,380	20,651	24,687	4,700
36 University of Arizona .....	57,305	54,515	48,095	39,949	8,487	20,314	24,443	4,061
37 U MD Baltimore Prof Sch .....	53,556	48,088	43,682	38,841	0	8,033	42,845	2,678
38 U CA Berkeley .....	53,477	48,466	45,570	41,857	15,421	29,592	8,464	0
39 University of Utah .....	52,749	51,938	45,910	42,728	0	20,980	30,100	1,669
40 Boston University .....	50,624	47,243	44,027	45,408	0	2,751	47,397	476
Total, 1st 40 insts. ....	3,802,053	3,528,390	3,262,533	3,086,341	98,745	1,131,861	2,398,831	172,616
41 CUNY Mt Sinai Sch of Med .....	49,800	50,853	42,035	43,607	0	14,411	35,389	0
42 U TX Hlth Sci Ctr San Ant .....	48,467	41,048	32,770	29,431	0	18,501	29,966	0
43 Indiana University .....	46,584	41,786	36,076	33,223	0	14,469	30,588	1,527
44 Virginia Commonwealth U .....	46,036	43,290	42,929	39,440	0	18,116	27,292	628
45 University of Florida .....	45,607	43,203	39,875	36,453	9,616	16,076	18,344	1,571
46 Pennsylvania State U .....	45,410	43,460	39,322	35,704	8,431	24,027	11,247	1,705
47 University of Georgia .....	41,856	39,128	34,728	34,431	11,251	27,949	2,656	0
48 University of Virginia .....	41,659	36,557	31,761	30,665	0	18,819	22,336	504
49 Northwestern University .....	41,409	37,909	35,117	34,869	0	24,566	15,981	862
50 Wake Forest University .....	41,163	36,886	32,811	29,671	0	98	41,065	0
Total, 1st 50 insts. ....	4,250,044	3,942,510	3,629,957	3,433,835	128,043	1,308,893	2,633,695	179,413

See explanatory information and SOURCE at end of table.

**Table B-59. Federally financed R&D expenditures in the life sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Life sciences total				1993 subfields			
	1993	1992	1991	1990	Agri-cultural sciences	Bio-logical sciences	Medical sciences	Other
51 Georgetown University .....	41,131	35,335	33,957	29,137	0	11,953	29,178	0
52 U CA Irvine .....	40,665	33,352	32,290	34,182	0	29,056	11,609	0
53 University of Cincinnati .....	40,519	39,596	34,159	32,820	0	25,719	14,800	0
54 Colorado State University .....	39,663	37,660	26,232	22,459	17,776	15,918	5,366	603
55 Michigan State University .....	39,470	34,266	31,781	30,013	15,701	16,126	7,157	486
56 University of IL Chicago .....	38,859	36,923	33,316	32,058	0	12,287	24,471	2,101
57 Tufts University .....	38,439	34,468	31,624	30,518	0	33,558	4,031	850
58 Thomas Jefferson U .....	38,293	28,861	23,100	22,451	0	23,067	14,605	621
59 U TX Hlth Sci Ctr Houston .....	38,137	35,940	32,301	27,835	0	11,482	26,293	362
60 U TX MD Anderson Cntr Ctr .....	38,065	31,561	29,336	25,982	0	18,296	19,769	0
Total, 1st 60 insts. ....	4,643,285	4,290,472	3,938,053	3,721,290	161,520	1,506,355	2,790,974	184,436
61 Oregon Health Sciences U ..	37,362	32,210	27,744	26,154	0	11,474	24,063	1,825
62 University of Connecticut .....	36,023	33,685	34,516	32,658	1,106	15,140	19,742	35
63 SUNY Stony Brook .....	35,952	33,866	30,230	27,702	0	20,695	15,257	0
64 U Med & Dent NJ .....	35,524	39,092	38,768	33,185	0	13,523	22,001	0
65 Dartmouth College .....	35,063	31,626	27,563	22,735	0	1,534	33,369	160
66 U of Tennessee System .....	33,375	30,592	29,582	28,446	5,370	14,020	12,223	1,762
67 Rockefeller University .....	33,148	33,354	32,571	31,375	0	26,943	6,205	0
68 Wayne State University .....	32,745	28,707	25,323	23,079	0	505	29,433	2,807
69 U MA Worcester .....	32,485	35,413	--	--	0	16,227	16,258	0
70 MA Institute of Tech .....	31,601	33,345	33,289	32,758	0	31,601	0	0
Total, 1st 70 insts. ....	4,986,563	4,622,362	4,217,639	3,979,382	167,996	1,658,017	2,969,525	191,025
71 Texas A&M University .....	31,418	31,859	23,178	20,262	10,349	17,037	3,941	91
72 Medical Col of Wisconsin .....	31,261	27,668	25,062	21,594	0	10,316	20,945	0
73 Louisiana State U System .....	30,824	27,990	26,496	28,599	1,044	21,442	8,271	67
74 U TX Med Br Galveston .....	30,555	24,281	20,974	21,693	0	12,026	14,732	3,797
75 Oregon State University .....	30,390	28,158	24,112	21,948	13,098	9,545	850	6,897
76 University of Kentucky .....	30,362	26,957	23,700	21,041	7,650	972	21,010	730
77 U of VT & State Agri Col .....	29,456	30,767	28,356	28,017	2,961	13,235	12,926	334
78 Tulane University .....	29,267	25,928	30,518	24,894	0	3,753	12,328	13,186
79 Purdue University .....	27,707	25,469	27,515	25,697	4,351	14,792	7,301	1,263
80 NC State U Raleigh .....	27,175	22,345	20,177	19,244	12,213	14,860	0	102
Total, 1st 80 insts. ....	5,284,978	4,893,784	4,467,727	4,212,371	219,662	1,775,995	3,071,829	217,492
81 University of IL Urbana .....	26,217	26,433	23,033	22,589	9,962	15,274	981	0
82 Washington State U .....	23,635	22,342	20,302	18,048	8,497	12,628	474	2,036
83 Iowa St U of Sci & Tech .....	23,387	19,752	17,328	16,825	8,541	12,269	1,093	1,484
84 University of Kansas .....	23,096	19,523	15,655	15,184	26	12,696	7,671	2,703
85 Unif Svcs U of Hlth Sci .....	22,319	20,377	18,436	16,495	0	5,048	17,271	0
86 U of Missouri Columbia .....	21,850	20,848	20,858	19,340	6,840	10,297	4,703	10
87 Med U of South Carolina .....	21,471	17,174	14,367	10,910	0	6,871	11,355	3,245
88 Rutgers the State U NJ .....	21,031	18,987	16,372	12,821	3,728	10,822	5,979	502
89 California Inst of Tech .....	18,782	21,252	20,485	18,668	0	18,782	0	0
90 SUNY Hlth Sci Ctr Brklyn .....	17,916	15,896	17,949	14,574	0	5,192	12,431	293
Total, 1st 90 insts. ....	5,504,682	5,096,368	4,652,512	4,377,825	257,256	1,885,874	3,133,787	227,765
91 St Louis University .....	17,644	17,005	15,680	13,264	0	8,937	8,707	0
92 Temple University .....	17,099	16,483	20,532	19,551	0	10,482	6,608	9
93 The Medical Col of PA .....	16,990	17,914	14,960	11,704	0	10,739	6,251	0
94 Loyola U of Chicago .....	15,948	16,439	13,720	4,814	0	3,457	9,091	3,400
95 SUNY Albany .....	15,717	15,445	2,031	1,936	0	15,717	0	0
96 U of Nebraska Lincoln .....	15,156	17,019	19,845	16,259	11,300	2,984	872	0
97 Brown University .....	14,225	13,354	13,775	14,315	0	1,162	11,241	1,822
98 Florida A&M University .....	14,084	13,894	12,066	6,891	7,002	6,810	265	71
99 U of PR Med Sci Campus .....	13,821	14,619	8,610	5,366	0	0	13,821	0
100 University of Oklahoma .....	13,604	11,742	10,686	9,289	0	6,853	5,843	908
Total, 1st 100 insts. ....	5,658,970	5,250,282	4,784,417	4,481,214	275,558	1,953,015	3,196,486	233,911

See explanatory information and SOURCE at end of table.

**Table B-59. Federally financed R&D expenditures in the life sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Life sciences total				1993 subfields			
	1993	1992	1991	1990	Agri-cultural sciences	Bio-logical sciences	Medical sciences	Other
101 New York Medical College ...	13,468 i	13,061	11,056	9,028	0 i	8,786 i	4,682 i	0 i
102 VA Polytech Inst & St U .....	13,466	12,344	12,257	13,035	9,057	3,394	320	695
103 University of New Mexico .....	13,427	15,837	13,297	10,373	0	8,864	4,563	0
104 U TX Austin .....	13,312	12,372	10,492	10,153	0	8,595	3,168	1,549
105 KS St U Agri & App Sci .....	12,658	11,617	10,404	9,392	7,514	5,020	124	0
106 U CA Riverside .....	12,498	11,622	10,382	10,499	10,174	1,213	1,111	0
107 University Hawaii Manoa .....	12,406	10,987	10,419	8,474	1,638	5,684	1,023	4,061
108 Brandeis University .....	12,203	11,592	11,542	10,549	0	12,203	0	0
109 West Virginia University .....	11,877	12,502	10,567	11,448	5,092	2,757	4,021	7
110 Mississippi State U .....	11,875	11,984	11,033	9,910	10,662	952	261	0
Total, 1st 110 insts. ....	5,786,160	5,374,200	4,895,866	4,584,075	319,695	2,010,483	3,215,759	240,223
111 University of Idaho .....	11,678	10,188	8,523	7,246	11,169	494	15	0
112 Rush University .....	11,203	8,195	6,174	5,392	0	4,240	5,908	1,055
113 Clemson University .....	10,975	7,435	7,693	5,838	7,107	3,022	124	722
114 U Arkansas Med Sci .....	10,964	9,642	7,807	6,654	0	4,258	6,706	0
115 Princeton University .....	10,700	11,044	10,891	11,174	0	10,700	0	0
116 George Washington U .....	10,210	13,397	13,185	15,728	0	3,050	6,619	541
117 U of NE Med Ctr Omaha .....	10,131	9,740	10,518	9,078	0	6,497	3,634	0
118 SUNY Hlth Sci Ctr Syrcse .....	9,878	9,985	10,667	9,965	0	7,108	2,770	0
119 Eastern Virginia Med Sch .....	9,753	6,966	7,093	7,782	0	2,529	7,224	0
120 New Mexico State U .....	9,716	8,912	7,728	8,463 i	4,343	5,341	32	0
Total, 1st 120 insts. ....	5,891,368	5,469,704	4,986,145	4,671,395	342,314	2,057,722	3,248,791	242,541
121 Hahnemann University .....	9,674	9,797	7,492	7,406	0	7,953	1,688	33
122 Utah State University .....	9,233	9,957	9,326	10,194	6,263	2,146	824	0
123 San Diego St University .....	9,225	7,393	7,364	6,263	3,143	4,760	1,216	106
124 U Arkansas Fayetteville .....	8,898	7,980	7,506	6,754	8,102	796	0	0
125 Oklahoma State University ..	8,723	7,626	6,625	6,754	4,170	2,989	1,014	550
126 Meharry Medical College .....	8,646	6,673	7,014	6,391	0	6,269	2,377	0
127 Montana State University .....	8,592	7,167	6,115	5,816	5,251	3,067	0	274
128 Albany Medical College .....	8,564	6,740	6,291	6,073	0	5,269	3,295	0
129 U MD College Park .....	8,551	7,528	10,357 e	6,287	2,051	5,009	0	1,491
130 U of South Carolina .....	8,390	7,364	8,352	8,328	0	3,191	4,339	860
Total, 1st 130 insts. ....	5,979,864	5,547,929	5,062,587	4,741,661	371,294	2,099,171	3,263,544	245,855
131 Med Col of Ohio Toledo .....	8,282	7,083	5,970	5,956	0	6,430	1,852	0
132 University of Wyoming .....	8,243	7,145	6,041	6,001	4,205	3,490	548	0
133 Auburn University .....	8,123	6,604	5,843	6,760	5,537	1,959	627	0
134 University of Mississippi .....	8,116	8,555	9,132	8,947	0	4,528	3,588	0
135 Howard University .....	8,039	7,340	3,714	7,830 i	0	981	6,827	231
136 U of Nevada Reno .....	7,840	7,152	5,054	6,524	749	6,186	251	654
137 University of Oregon .....	7,755	7,177	6,062	5,803	0	7,755	0	0
138 Medical Col of Georgia .....	7,713	7,747	8,081	8,045	0	6,404	1,309	0
139 U of South Florida .....	7,594	7,563	7,761	6,250	0	513	7,055	26
140 U of South Alabama .....	7,436	7,084	6,902	6,771	0	6,063	1,237	136
Total, 1st 140 insts. ....	6,059,005	5,621,379	5,127,147	4,810,548	381,785	2,143,480	3,286,838	246,902
141 U MA Amherst .....	7,152	7,222	--	--	1,959	4,245	0	948
142 Wright State University .....	6,549	5,572	4,887	4,238	0	881	5,652	16
143 Carnegie Mellon U .....	6,514	5,070	5,197	4,625	0	5,905	0	609
144 C R Drew U of Med & Sci .....	6,483	5,949	5,311	3,796 i	0	0	6,483	0
145 Morehouse School of Med ...	6,429	6,155 i	5,610 i	5,149 i	0	6,304	125	0
146 U of Alaska Fairbanks .....	6,394 i	4,927	5,355	6,324	2,203 i	4,191 i	0 i	0 i
147 University of Louisville .....	6,081	5,546	5,349	7,006	0	2,695	2,794	592
148 Strn IL U Carbondale .....	5,782	5,461	5,121	5,303	1,798	1,542	2,412	30
149 Texas Tech University .....	5,254	5,486	4,343	4,013	1,248	2,648	1,358	0
150 North Dakota State U .....	5,064	4,707	4,185	4,044	3,738	1,213	45	68
Total, 1st 150 insts. ....	6,120,707	5,677,474	5,172,505	4,855,046	392,731	2,173,104	3,305,707	249,165
Total, all other sampled insts. ....	262,108	230,962	244,367	227,029	56,979	139,345	45,430	20,354

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-60. Total and federally financed R&D expenditures in the agricultural sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	1,558,090	1,512,300	1,458,432	1,349,302	449,710	417,741	377,281	352,804
1 U CA Davis .....	99,428	93,877	92,896	92,153	29,917	23,967	18,040	15,627
2 University of Minnesota .....	59,265	48,107	50,863	47,070	10,745	9,609	9,470	9,423
3 University of Georgia .....	57,269	55,371	55,861	54,494	11,251	9,982	8,532	8,421
4 U of Nebraska Lincoln .....	51,431	49,273	48,814	45,945	11,300	15,060	18,514	14,965
5 Texas A&M University .....	49,598	45,772	40,244	38,997	10,349	9,767	6,065	5,533
6 U CA Berkeley .....	47,751	47,063	47,719	46,886	15,421	14,218	13,985	12,763
7 U CA Riverside .....	43,090	43,151	42,555	41,103	10,174	9,189	7,759	7,835
8 NC State U Raleigh .....	42,047	40,245	37,659	36,440	12,213	10,146	7,797	7,802
9 Louisiana State U System .....	40,713	41,110	38,406	36,396	1,044	1,051	854	1,128
10 Cornell University .....	39,002	37,262	43,900	42,578	11,462	9,263	9,178	8,624
Total, 1st 10 insts. ....	529,594	501,231	498,917	482,062	123,876	112,252	100,194	92,121
11 VA Polytech Inst & St U .....	38,493	38,668	35,933	34,642	9,057	7,844	7,011	7,407
12 Mississippi State U .....	36,674	32,912	33,339	33,358	10,662	10,681	9,929	9,022
13 Oregon State University .....	35,740	32,292	31,921	27,105	13,098	11,452	10,438	8,225
14 Pennsylvania State U .....	35,739	34,594	35,852	37,407	8,431	7,632	7,720	7,848
15 U Arkansas Fayetteville .....	35,160	24,867	22,997	21,115	8,102	7,354	7,158	6,609
16 Iowa St U of Sci & Tech .....	33,996	34,288	25,216	28,453	8,541	10,406	8,558	8,509
17 University of Kentucky .....	33,959	31,730	29,971	27,305	7,650	7,896	7,134	7,790
18 Michigan State University .....	33,694	49,432	46,285	44,216	15,701	15,505	14,381	13,580
19 KS St U Agri & App Sci .....	33,209	32,176	31,691	29,423	7,514	7,706	7,469	6,304
20 University of Arizona .....	32,499	31,089	28,353	22,076	8,487	7,644	6,471	4,428
Total, 1st 20 insts. ....	878,757	843,279	820,475	787,162	221,119	206,372	186,463	171,843
21 University of IL Urbana .....	30,586	28,792	26,036	25,750	9,962	8,221	7,098	7,193
22 U of Missouri Columbia .....	30,402	30,376	31,425	30,113	6,840	6,282	5,471	6,578
23 University of Idaho .....	29,578	26,361	18,998	16,497	11,169	9,205	6,445	4,820
24 U MD College Park .....	28,262	29,941	39,962	4,261	2,051	1,797	3,643e	1,253
25 Ohio State University .....	28,036	32,752	30,203	28,656	7,380	8,134	8,265	8,641
26 Auburn University .....	27,648	27,409	27,875	29,153	5,537	5,103	4,759	5,929
27 U WI Madison .....	27,119	25,586	23,154	28,087	9,016	9,329	8,269	10,407
28 Colorado State University .....	26,801	21,569	14,990	14,584	17,776	13,845	9,336	7,073
29 Washington State U .....	25,488	26,543	24,581	21,761	8,497	9,126	8,082	7,088
30 U of Tennessee System .....	25,290	21,964	22,068	20,894	5,370	5,139	4,570	4,248
Total, 1st 30 insts. ....	1,157,967	1,114,572	1,079,767	1,006,918	304,717	282,553	252,401	235,073
31 Purdue University .....	24,519	23,316	24,010	21,867	4,351	3,746	4,232	3,575
32 Clemson University .....	23,966	25,104	24,770	23,634	7,107	4,028	4,013	3,588
33 Oklahoma State University ..	23,219	23,980	23,712	22,355	4,170	3,835	3,669	3,682
34 Rutgers the State U NJ .....	22,446	20,206	21,252	19,184	3,728	3,164	3,104	2,941
35 University of Florida .....	20,807	24,265	23,958	25,193	9,616	8,920	8,010	8,272
36 North Dakota State U .....	17,433	17,412	11,835	5,651	3,738	3,599	2,844	3,002
37 Montana State University .....	16,241	15,264	11,713	12,144	5,251	3,832	3,067	2,677
38 Utah State University .....	15,657	14,947	13,166	12,637	6,263	6,449	5,502	5,424
39 New Mexico State U .....	13,970	12,800	11,239	10,447i	4,343	3,958	3,509	3,588i
40 West Virginia University .....	13,829	11,354	11,305	11,293	5,092	5,360	4,927	4,892
Total, 1st 40 insts. ....	1,350,054	1,303,220	1,256,727	1,171,323	358,376	329,444	295,278	276,714
41 U of PR Mayaguez .....	13,449	22,675i	24,824i	26,967	4,508	7,355i	9,459i	11,561
42 University Hawai'i Manoa .....	10,464	10,523	10,191	8,866	1,638	1,591	1,616	1,273
43 University of Delaware .....	10,418	10,426	9,309	7,472	1,712	1,765	1,398	1,444
44 University of Wyoming .....	9,961	9,279	7,294	7,082	4,205	3,598	3,124	3,149
45 U MA Amherst .....	8,857	8,544	--	--	1,959	1,649	--	--
46 Florida A&M University .....	8,354i	8,156	7,051	3,614e	7,002i	6,907	6,037	2,976
47 South Dakota State U .....	8,245	7,902	7,250	6,104	2,575	2,663	2,492	2,197
48 Texas Tech University .....	7,913	8,456	7,836	6,993	1,248	1,378	811	709
49 U of Maine Orono .....	7,643	6,574	9,149	7,763	1,471	1,339	1,531	1,556
50 University of Washington .....	7,547	7,035	12,074	10,309	4,640	4,263	7,545	6,716
Total, 1st 50 insts. ....	1,442,905	1,402,790	1,351,705	1,256,493	389,334	361,952	329,291	308,295

See explanatory information and SOURCE at end of table.



**Table B-60. Total and federally financed R&D expenditures in the agricultural sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
51 University of Connecticut .....	6,980	7,265	8,780	5,563	1,106	909	1,469	1,479
52 U of Alaska Fairbanks .....	6,466i	7,762	7,935	7,341	2,203i	1,697	1,492	1,921
53 U of VT & State Agri Col .....	6,109	5,459	4,681	4,481	2,961	2,544	1,568	1,612
54 University of Montana .....	5,533	2,850	2,430	2,373	1,965	1,379	1,113	1,005
55 U of Nevada Reno .....	5,095	7,223	4,207	5,633	749	1,660	300	2,065
56 U of Rhode Island .....	4,818i	5,411i	5,223	1,866	370i	289i	272	0
57 Alabama A&M University .....	3,912	2,661	2,433	3,056	2,896	1,951	1,914	2,260
58 Virginia State University .....	3,750	3,788	3,716	1,886	3,710	3,744	3,268	1,372
59 Sthrn IL U Carbondale .....	3,664	3,634	3,182	2,017	1,798	1,569	1,258	518
60 U of New Hampshire .....	3,356	2,601	3,527	3,385	986	1,107	1,633e	1,246
Total, 1st 60 insts. ....	1,492,588	1,451,444	1,397,819	1,294,094	408,078	378,801	343,578	321,773
61 San Diego St University .....	3,151	1,768	2,534	1,867	3,143	1,752	2,534	1,854
62 SUNY Col Env Sci & Frstry ..	3,129	2,642	1,634	1,716	394	301	76	99
63 NC A&T State University .....	3,040	3,435	3,181	2,780	2,800	3,015	2,928	2,583
64 Prairie View A&M U .....	2,893	3,164	2,527	2,598	2,679	3,030	2,429	2,510
65 Texas A&M U Kingsville .....	2,703	2,082	2,124	1,989	249	342	234	219
66 Tennessee State U .....	2,665	2,227	1,781	1,520	2,665	2,227	1,781	1,520
67 Lincoln University .....	2,647	2,881	2,602	2,486	2,415	2,538	2,339	2,315
68 Duke University .....	2,632	2,966	2,180	1,740	1,116	1,210	659	431
69 U MD Eastern Shore .....	2,487	3,250	1,298	1,427	2,133	2,798	1,049	1,168
70 Southern U All Campuses .....	2,346	2,075	3,645	2,928i	1,949	1,873	2,508	2,166i
Total, 1st 70 insts. ....	1,520,281	1,477,934	1,421,325	1,315,145	427,621	397,887	360,115	336,638
71 Michigan Tech University .....	2,215i	2,085	2,179	2,047	1,414i	1,192	895	628
72 Kentucky State University ....	2,174	2,358	1,535i	2,163i	2,174	2,358	1,535i	2,163i
73 Western Illinois U .....	2,164i	1,668i	1,288i	906i	1,626i	1,278i	971i	660i
74 CA St U Fresno .....	2,153	1,648i	1,436i	1,226i	107	70i	60i	50i
75 Tuskegee University .....	2,098	1,842	1,804e	1,880	2,077	1,813	1,747	1,878
76 U Arkansas Pine Bluff .....	2,089	1,738	1,399	1,188	1,397	1,738	1,202	1,188
77 Alcorn State University .....	1,887	1,738	1,534	1,913	1,874	1,738	1,461	1,465
78 Langston University .....	1,881	1,750	1,310	1,200	1,570	1,446	1,310	1,200
79 U of the Virgin Islands .....	1,684	1,355i	1,345i	1,011e	1,030	990i	1,040i	995e
80 University of Guam .....	1,639e	1,608i	1,578i	1,550i	1,164e	1,136i	1,111i	1,087i
Total, 1st 80 insts. ....	1,540,265	1,495,724	1,436,733	1,330,229	442,054	411,646	371,447	347,952
81 Georgia Institute of Tech .....	1,509	1,010	610	0	844	567	350	0
82 Stephen F Austin St U .....	1,359	1,355	923	834	269	292	282	289
83 U CA Santa Cruz .....	1,318	1,034	1,083	917	49	4	7	5
84 Brigham Young University ....	1,136	975	992	601	521	545	558	202
85 Yale University .....	1,116	1,137	1,209	1,063	411	316	317	212
86 University of DC .....	1,058i	954i	942	831	611i	539i	533	399
87 Clark Atlanta University .....	1,039	990	92	57i	836	796	92	57i
88 Southwest Missouri St U .....	979	1,059i	968i	882i	5	2i	2i	2i
89 U MA Dartmouth .....	904	585	--	--	904	583	--	--
90 Northern Marianas College ..	895	--	--	--	559	--	--	--
Total, 1st 90 insts. ....	1,551,578	1,504,823	1,443,552	1,335,414	447,063	415,290	373,588	349,118
91 Northern Arizona U .....	783	2,123	1,208	1,033	783e	650	278	283
92 CA Poly St U San Luis Ob ..	735	539	668	612	75	73	51	70
93 Arkansas State University ....	521	547	446	381	0	0	0	0
94 Humboldt St University .....	451e	451i	451i	451i	166e	166i	166i	166i
95 U WI Stevens Point .....	404	284	205	116	85	66	52	67
96 U of Southwestern LA .....	317	259	213	214	17	4	14	8
97 Louisiana Tech University ....	226	150i	100i	186i	156	104i	66i	161i
98 Arizona State University .....	225	185	158	111	53	95	65	15
99 Illinois State University .....	216	92	163	32	147	16	42	0
100 Northwest Missouri St U .....	206	170i	133i	95i	0	4i	8i	12i
Total, 1st 100 insts. ....	1,555,662	1,509,623	1,447,297	1,338,645	448,545	416,468	374,330	349,900
Total, all other sampled insts. ....	2,428	2,677	11,135	10,657	1,165	1,273	2,951	2,904

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-61. Total and federally financed R&D expenditures in the biological sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	3,536,452	3,296,126	3,062,174	2,857,815	2,312,449	2,138,415	1,948,581	1,842,977
1 Baylor Col of Medicine .....	86,442	84,799	77,138	68,716	57,104	55,140	47,587	44,003
2 University of Washington .....	85,386	62,627	56,042	49,401	72,981	55,943	50,190	45,022
3 Harvard University .....	78,057	75,582	72,417	68,950	65,549	64,280	58,462	58,242
4 Texas A&M University .....	73,299	72,275	67,121	63,850	17,037	19,126	15,068	12,804
5 Washington University .....	66,816	63,294	56,545	55,023	49,576	45,149	39,939	38,686
6 U WI Madison .....	66,151	65,329	58,766	51,297	35,629	35,055	31,321	28,145
7 Yale University .....	64,733	61,965	55,776	54,898	50,540	47,825	46,081	48,294
8 University of Michigan .....	64,509	59,995	57,119	54,127	43,227	39,694	38,521	38,605
9 U of NC Chapel Hill .....	62,353	55,941	49,539	44,205	47,640	41,102	37,992	34,809
10 Johns Hopkins U .....	61,227	58,220	59,710	57,474	48,554	45,860	45,847	42,590
Total, 1st 10 insts. ....	708,973	660,027	610,173	567,941	487,837	449,174	411,008	391,200
11 Rockefeller University .....	60,971	61,651	61,707	58,846	26,943	28,101	29,826	27,671
12 Columbia U Main Division .....	55,257	54,395	49,278	47,751	49,074	47,514	42,550	41,967
13 Case Western Reserve U .....	55,217	51,811	27,954	21,901e	43,562	38,220	19,949	18,414
14 U TX MD Anderson Cntr Ctr .....	52,798	44,150	44,461	39,053	18,296	15,841	15,995	13,493
15 U TX SW Med Ctr Dallas .....	48,994	44,187	40,843	36,474	31,591	28,470	27,876	25,586
16 University of Georgia .....	48,993	47,642	43,676	42,588	27,949	26,841	23,513	23,476
17 U of Alabama Birmingham .....	45,018	38,067	33,194	31,192	31,493	26,618	22,673	22,248
18 University of Minnesota .....	44,563	38,860	40,172	36,218	26,412	25,256	24,208	23,464
19 Cornell University .....	43,045	43,089	47,919	48,441	25,505	23,364	24,303	24,902
20 Tufts University .....	39,489	34,910	31,289	30,544	33,558	29,911	26,258	25,476
Total, 1st 20 insts. ....	1,203,318	1,118,789	1,030,666	960,949	802,220	739,310	668,159	637,897
21 SUNY Buffalo .....	39,347	39,157	34,817	34,412	33,449	33,380	29,022	29,001
22 NC State U Raleigh .....	38,290	34,018	32,438	31,752	14,860	12,010	9,534	9,280
23 Vanderbilt University .....	38,220	36,758	30,340	28,932	34,147	31,752	27,922	26,442
24 U CA Berkeley .....	37,718	34,212	30,685	27,161	29,592	25,685	24,106	21,239
25 Purdue University .....	37,163	36,240	37,073	34,342	14,792	14,956	16,621	15,518
26 Pennsylvania State U .....	37,041	36,334	32,896	30,910	24,027	22,965	19,422	17,387
27 University of Cincinnati .....	36,636	34,847	31,538	28,927	25,719	25,030	22,083	20,148
28 U CA Irvine .....	36,480	30,455	29,489	14,805	29,056	23,859	23,271	11,587
29 U of Pennsylvania .....	36,059	36,905	32,800	31,681	29,776	30,733	27,576	26,756
30 MA Institute of Tech .....	35,792	38,101	34,398	37,711	31,601	33,345	33,289	32,758
Total, 1st 30 insts. ....	1,576,064	1,475,816	1,357,140	1,261,582	1,069,239	993,025	901,005	848,013
31 Rutgers the State U NJ .....	35,594	34,624	31,332	29,044	10,822	10,790	9,045	6,847
32 Louisiana State U System .....	35,506	31,650	27,000	23,704	21,442	17,461	15,766	12,154
33 New York University .....	35,480	34,377	30,958	28,582	26,584	24,293	21,798	21,385
34 Duke University .....	35,441	36,000	32,910	30,788	28,873	29,099	27,561	26,856
35 Ohio State University .....	35,365	35,477	33,657	32,314	20,651	20,664	18,312	17,028
36 Michigan State University .....	34,609	23,111	21,640i	20,567	16,126	14,573	13,515i	12,764
37 U CA Davis .....	34,495	31,133	29,382	29,489	15,601	12,180	10,465	9,913
38 Iowa St U of Sci & Tech .....	33,355	27,103	25,977	26,160	12,269	7,425	6,154	6,407
39 University of Arizona .....	32,776	31,821	29,334	25,258	20,314	19,794	17,704	14,602
40 University of Rochester .....	32,681	30,484	30,422	29,701	28,574	26,358	27,097	26,144
Total, 1st 40 insts. ....	1,921,366	1,791,596	1,649,752	1,537,189	1,270,495	1,175,662	1,068,422	1,002,113
41 Northwestern University .....	32,257	32,319	30,591	29,865	24,566	23,344	20,792	20,389
42 U MD College Park .....	31,184	29,017	30,936	10,632	5,009	4,197	5,624e	3,374
43 SUNY Stony Brook .....	30,221	29,064	25,296	20,585	20,695	19,694	17,716	15,840
44 University of Kansas .....	29,044	25,060	22,331	19,102	12,696	11,525	10,352	10,200
45 U Med & Dent NJ .....	28,894	28,264	26,050e	23,551e	13,523	13,160	11,216	10,025
46 U of Missouri Columbia .....	27,773	22,783	22,635	21,487	10,297	9,356	9,299	8,205
47 Thomas Jefferson U .....	27,164	19,940	10,930	10,164	23,067	17,329	9,741	9,325
48 Washington State U .....	27,065	25,944	23,841	21,736	12,628	11,747	11,175	10,172
49 University of Connecticut .....	26,696	25,706	28,044	29,692	15,140	13,281	14,066	13,751
50 University of Chicago .....	26,240	30,780	29,095	28,992	23,135	25,725	25,083	25,517
Total, 1st 50 insts. ....	2,207,904	2,060,473	1,899,501	1,752,995	1,431,251	1,325,020	1,203,486	1,128,911

See explanatory information and SOURCE at end of table.

**Table B-61. Total and federally financed R&D expenditures in the biological sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
51 Emory University .....	25,281	19,616	17,575	16,628	20,961	16,591	14,639	13,486
52 Virginia Commonwealth U ...	25,135	22,424	20,700	20,527	18,116	16,637	15,582	14,671
53 University of Virginia .....	24,839	22,787	20,757	20,553	18,819	17,012	15,290	14,893
54 University of Utah .....	24,737	25,383	20,691	19,310	20,980	20,102	16,886	15,808
55 University of Florida .....	24,506	23,846	23,319	20,537	16,076	14,725	14,497	11,563
56 U of Iowa .....	23,652	22,193	23,314	22,498	17,720	16,577	16,084	15,575
57 University of Colorado .....	23,348	22,324	27,203	26,781	18,129	17,074	20,724	20,709
58 U MA Worcester .....	23,311	22,424	--	--	16,227	16,746	--	--
59 Yeshiva University .....	23,305	22,671	22,547	21,831	18,644	17,720	17,635	16,917
60 Indiana University .....	22,635	20,054	17,420	15,469	14,469	13,182	11,637	10,911
Total, 1st 60 insts. ....	2,448,653	2,284,195	2,093,027	1,937,129	1,611,392	1,491,386	1,346,460	1,263,444
61 University of IL Chicago .....	22,229	21,096	19,809	22,588	12,287	12,217	12,448	12,798
62 California Inst of Tech .....	21,982	24,954	26,275	24,857	18,782	21,252	20,485	18,668
63 Colorado State University ....	21,437	19,671	23,543	21,002	15,918	14,841	16,238	15,031
64 University of IL Urbana .....	21,275	21,637	21,210	20,137	15,274	14,455	13,908	14,040
65 U TX Hlth Sci Ctr San Ant ....	20,739	20,445	17,628	16,753	18,501	15,326	12,489	12,058
66 SUNY Albany .....	19,869	19,373	2,837	2,789	15,717	15,445	2,024	1,882
67 Oregon State University .....	19,850	18,082	15,974	14,968	9,545	8,538	6,976	7,476
68 U of NE Med Ctr Omaha .....	19,797	20,737	17,875	11,786	6,497	6,311	6,683	6,583
69 U of Tennessee System .....	19,434	18,037	18,571	17,260	14,020	12,704	12,784	11,486
70 U CA Los Angeles .....	19,356	19,015	17,422	20,979	15,208	14,712	13,144	12,830
Total, 1st 70 insts. ....	2,654,621	2,487,242	2,274,171	2,110,248	1,753,141	1,627,187	1,463,639	1,376,296
71 Temple University .....	18,955	17,270	23,858	23,491	10,482	9,701	13,252	13,552
72 U TX Med Br Galveston .....	18,699	15,047	13,393	12,589	12,026	10,092	8,917	8,773
73 U of VT & State Agri Col .....	17,920	17,001	16,393	16,274	13,235	12,673	12,692	12,998
74 Princeton University .....	17,767	16,684	18,513	17,597	10,700	11,044	10,891	11,174
75 CUNY Mt Sinai Sch of Med ..	17,195	16,703	15,892	16,934	14,411	14,521	12,972	13,866
76 Brandeis University .....	16,766	16,177	15,608	14,303	12,203	11,592	11,542i	10,549
77 U MD Baltimore Prof Sch .....	16,766	15,047	15,025e	12,553	8,033	7,213	6,552	5,826
78 University of Miami .....	16,285	15,212	15,525	16,371	13,831	13,272	13,298	13,862
79 Medical Col of Wisconsin .....	16,067	12,638	11,729	11,218	10,316	8,024	7,268	6,996
80 Medical Col of Georgia .....	15,839	12,067	6,621	6,405	6,404	5,560	5,805	5,688
Total, 1st 80 insts. ....	2,826,880	2,641,088	2,426,728	2,257,983	1,864,782	1,730,879	1,566,828	1,479,580
81 Georgetown University .....	15,521	14,553	13,207	12,112	11,953	11,519	10,776	9,817
82 University of Oklahoma .....	15,057	13,012	11,273	9,352	6,853	5,547	4,363	4,049
83 Oregon Health Sciences U ..	14,622i	12,657i	10,758i	10,519i	11,474i	9,892i	8,520i	8,032i
84 U TX Hlth Sci Ctr Houston ....	14,302	13,632	15,871	15,608	11,482	11,212	10,681	11,039
85 The Medical Col of PA .....	14,152	14,062	12,151	8,618	10,739	10,045	8,671	6,982
86 U CA San Diego .....	13,701	13,110	12,013	11,405	12,315	12,078	10,759	10,348
87 University of New Mexico .....	13,650	12,763	16,384	16,060	8,864	8,298	6,534	5,321
88 U TX Austin .....	13,032	12,044	12,754	14,080	8,595	7,762	7,532	7,002
89 Med U of South Carolina .....	12,866	11,037	9,745	8,055	6,871	7,070	6,261	4,408
90 U of Nebraska Lincoln .....	12,824	5,673	5,681	4,942	2,984	1,060	554	473
Total, 1st 90 insts. ....	2,966,607	2,763,631	2,546,565	2,368,734	1,956,912	1,815,362	1,641,479	1,547,051
91 Hahnemann University .....	12,492	11,769	3,165	4,204	7,953	6,125	2,039	3,830
92 New York Medical College ...	11,789i	10,755	9,218	7,878	8,786i	8,520	7,300	6,076
93 KS St U Agri & App Sci .....	10,762	8,338	7,274	7,087	5,020	3,789	2,793	2,952
94 Clemson University .....	10,192	9,323	8,184	9,091	3,022	2,895	3,470	1,972
95 University Hawaii Manoa .....	10,123	9,346	8,715	7,332	5,684	4,495	3,671	3,131
96 Stanford University .....	10,030	9,941	8,956	9,780	8,362	6,924	6,587	7,704
97 University of Oregon .....	9,865	8,984	7,061	6,793	7,755	6,970	5,871	5,581
98 St Louis University .....	9,766	9,203	9,065	8,342	8,937	8,685	8,227	7,489
99 Oklahoma State University ..	9,228	11,078	9,349	8,611	2,989	3,427	2,771	2,993
100 VA Polytech Inst & St U .....	9,028	10,098	11,547	13,090	3,394	3,652	3,888	4,189
Total, 1st 100 insts. ....	3,069,882	2,862,466	2,629,099	2,450,942	2,018,814	1,870,844	1,688,096	1,592,968
Total, all other sampled insts. ....	466,570	433,660	433,075	406,873	293,635	267,571	260,485	250,009

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-62. Total and federally financed R&D expenditures in the medical sciences  
at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	5,285,269	4,959,579	4,546,641	4,154,650	3,351,137	3,112,369	2,848,718	2,671,462
1 U CA San Francisco .....	314,599	295,784	268,700	238,278	210,148	202,283	190,936	175,257
2 U CA Los Angeles .....	156,060	148,278	136,264	133,412	104,672	96,756	90,024	89,654
3 Johns Hopkins U .....	147,233	131,339	127,022	117,366	121,895	108,987	105,005	95,721
4 U CA San Diego .....	139,794	128,869	117,698	99,909	113,701	104,479	94,433	80,358
5 Stanford University .....	131,734	145,394	129,184	125,002	104,675	100,289	95,793	103,145
6 U of Pennsylvania .....	130,980	121,410	111,181	100,918	96,520	84,302	79,448	70,201
7 University of Minnesota .....	126,164	130,983	103,342	99,238	76,825	73,889	48,882	49,199
8 University of Michigan .....	123,114	119,825	118,472	93,805	74,442	69,515	69,814	58,116
9 Duke University .....	118,024	110,685	96,758	77,747	69,746	65,778	62,870	56,314
10 University of Pittsburgh .....	117,483	100,885	79,439	67,811	96,538	81,203	64,506	55,861
Total, 1st 10 insts. ....	1,505,185	1,433,452	1,288,060	1,153,486	1,069,162	987,481	901,711	833,826
11 Yale University .....	115,142	104,688	96,542	87,132	85,118	77,825	73,061	67,682
12 U WI Madison .....	114,432	107,226	101,919	95,903	61,306	57,132	54,753	53,593
13 University of Washington .....	107,340	107,541	82,930	77,129	83,030	84,810	66,007	62,369
14 U of Southern California .....	89,936	90,762	82,874	79,666	59,388	56,295	54,149	54,318
15 Cornell University .....	89,522	83,599	79,189	75,576	57,859	53,489	50,727	51,396
16 U MD Baltimore Prof Sch .....	89,418	80,250	80,130	66,951	42,845	38,471	34,946	31,073
17 Washington University .....	88,023	83,523	82,399	74,667	61,646	61,727	58,048	52,455
18 Baylor Col of Medicine .....	85,810	83,199	83,946	86,406	30,519	30,594	31,165	31,790
19 U of Iowa .....	82,494	71,676	62,116	58,626	52,666	47,133	42,729	42,321
20 Harvard University .....	81,634	81,659	71,817	67,571	57,460	55,484	47,310	44,351
Total, 1st 20 insts. ....	2,448,936	2,327,575	2,111,922	1,923,113	1,660,999	1,550,441	1,414,606	1,325,174
21 U of Alabama Birmingham .....	79,622	72,389	72,103	71,806	59,854	53,454	51,306	49,556
22 Columbia U Main Division .....	76,947	72,375	69,554	65,322	67,032	61,390	56,774	55,816
23 U TX MD Anderson Cntr Ctr .....	69,200	61,723	57,861	45,766	19,769	15,720	13,341	12,489
24 University of Miami .....	67,274	56,568	55,240	51,930	44,321	40,418	34,790	33,770
25 U TX SW Med Ctr Dallas .....	65,264	58,076	53,668	49,445	36,352	33,029	29,870	29,379
26 University of Colorado .....	63,634	58,479	44,204	45,307	49,265	44,468	33,502	31,875
27 U of NC Chapel Hill .....	61,657	54,404	47,137	41,524	46,863	41,502	38,443	34,031
28 Emory University .....	61,167	51,101	50,005	44,527	36,484	30,724	26,090	21,868
29 U CA Davis .....	59,920	58,474	56,092	55,833	40,897	38,842	37,211	38,496
30 Boston University .....	59,123	53,937	49,305	50,688	47,397	44,232	40,693	42,592
Total, 1st 30 insts. ....	3,112,744	2,925,101	2,667,091	2,445,261	2,109,233	1,954,220	1,776,626	1,675,046
31 CUNY Mt Sinai Sch of Med .....	58,142	58,858	50,418	46,818	35,389	36,332	29,063	29,741
32 Wayne State University .....	56,654	50,787	44,086	39,574	29,433	25,821	22,716	21,001
33 Wake Forest University .....	56,171	48,405	42,316	38,015	41,065	36,725	32,318	29,289
34 U TX Hlth Sci Ctr San Ant .....	54,500	44,734	34,140	28,910	29,966	25,722	20,281	17,373
35 University of Rochester .....	52,082	52,490	53,386	51,965	36,860	37,367	40,649	40,893
36 Indiana University .....	49,958	47,243	43,325	38,275	30,588	27,409	23,270	21,641
37 U of South Florida .....	49,067	40,481	42,661	39,271	7,055	6,965	6,983	5,889
38 New York University .....	48,600	44,960	41,624	41,404	33,420	32,600	30,139	29,109
39 University of IL Chicago .....	48,497	44,637	39,371	34,917	24,471	22,269	18,314	18,063
40 Georgetown University .....	47,836	40,325	37,168	29,008	29,178	23,816	23,181	19,320
Total, 1st 40 insts. ....	3,634,251	3,398,021	3,095,586	2,833,418	2,406,658	2,229,246	2,023,540	1,907,365
41 U Med & Dent NJ .....	47,516	56,241	54,737	48,238	22,001	25,932	27,552	23,160
42 Yeshiva University .....	46,610	45,342	45,096	43,664	37,288	35,439	35,273	33,835
43 University of Chicago .....	45,345	47,513	47,358	49,984	37,307	38,761	38,066	38,733
44 Dartmouth College .....	44,908	41,706	34,597	32,318	33,369	30,627	26,817	21,988
45 Virginia Commonwealth U .....	44,896	40,892	39,516	37,074	27,292	26,117	26,536	24,250
46 Ohio State University .....	43,904	35,416	29,020	24,238	24,687	20,573	15,990	14,562
47 University of Connecticut .....	42,778	39,312	37,915	38,020	19,742	19,343	18,522	17,144
48 U TX Hlth Sci Ctr Houston .....	41,632	38,510	34,705	26,703	26,293	24,023	20,824	15,860
49 University of Virginia .....	41,246	37,474	29,919	30,327	22,336	19,466	16,470	15,724
50 University of Arizona .....	40,191	37,778	36,765	32,656	24,443	23,377	21,360	19,373
Total, 1st 50 insts. ....	4,073,277	3,818,205	3,485,214	3,196,640	2,681,416	2,492,904	2,270,950	2,131,994

See explanatory information and SOURCE at end of table.

**Table B-62. Total and federally financed R&D expenditures in the medical sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
51 Northwestern University .....	39,300	35,054	39,288	35,483	15,981	13,315	13,538	13,168
52 SUNY Buffalo .....	38,666	35,465	32,501	27,757	24,021	22,334	20,685	16,631
53 University of Utah .....	38,272	41,530	37,118	35,543	30,100	30,457	26,673	26,668
54 Oregon Health Sciences U ..	38,109i	33,082i	27,857i	27,937i	24,063i	20,744i	17,868i	16,843i
55 University of Florida .....	35,991	34,611	31,984	31,824	18,344	17,146	15,241	15,185
56 University of Kentucky .....	34,709	30,258	25,025	21,254	21,010	17,600	15,280	12,404
57 Case Western Reserve U .....	34,210	30,553	43,933	38,510e	26,310	24,191	35,763	32,476
58 Medical Col of Wisconsin .....	32,622	30,941	28,717	23,404	20,945	19,644	17,794	14,598
59 U MA Worcester .....	30,966	30,918	--	--	16,258	18,667	--	--
60 U CA Irvine .....	30,406	29,447	25,930	38,456	11,609	9,493	9,019	22,595
Total, 1st 60 insts. ....	4,426,528	4,150,064	3,777,567	3,476,808	2,890,057	2,686,495	2,442,811	2,302,562
61 Vanderbilt University .....	29,558	32,650	28,872	27,906	26,467	26,042	26,485	25,835
62 U CA Berkeley .....	28,820	37,507	25,889	13,809	8,464	8,563	7,479	7,855
63 University of Cincinnati .....	28,270	27,379	23,169	22,568	14,800	14,566	12,076	12,672
64 Tulane University .....	28,131	22,810	27,150	20,413	12,328	9,488	14,047	9,663
65 U TX Med Br Galveston .....	28,087	23,928	20,511	17,868	14,732	11,521	9,759	10,636
66 SUNY Stony Brook .....	26,424	22,419	18,363	17,233	15,257	13,498	11,050	10,974
67 Med U of South Carolina .....	25,963	20,756	15,920	14,884	11,355	10,086	8,106	6,459
68 U of Tennessee System .....	24,091	21,253	19,715	20,435	12,223	11,301	10,394	11,495
69 Unif Svcs U of Hlth Sci .....	23,869	20,430i	18,219i	16,008i	17,271	14,146i	12,799i	11,451i
70 Thomas Jefferson U .....	22,766	18,666	20,636	17,147	14,605	10,964	11,860	10,167
Total, 1st 70 insts. ....	4,692,507	4,397,862	3,996,011	3,665,079	3,037,559	2,816,670	2,566,866	2,419,769
71 Rush University .....	21,686	17,990	19,323	15,393	5,908	3,826	3,300	3,125
72 U of VT & State Agri Col .....	19,867	21,256	19,389	18,113	12,926	15,135	13,487	12,373
73 SUNY Hlth Sci Ctr Brklyn .....	19,140	16,378	23,923	12,123	12,431	10,559	11,940	7,724
74 U of PR Med Sci Campus .....	17,574	18,296	11,014	6,293	13,821	14,619	8,610	5,366
75 Temple University .....	17,336	16,791	15,021	13,618	6,608	6,777	7,273	5,999
76 University of Oklahoma .....	17,033	19,416	20,900	16,173	5,843	4,888	6,070	5,238
77 U of Missouri Columbia .....	16,319	17,447	17,618	14,079	4,703	5,206	6,087	4,557
78 Pennsylvania State U .....	16,141	16,620	15,463	13,799	11,247	11,559	11,389	9,790
79 Louisiana State U System .....	15,947	18,066	14,713	22,365	8,271	9,443	9,850	14,732
80 Brown University .....	15,830	15,307	13,650	13,618	11,241	10,563	10,243	10,749
Total, 1st 80 insts. ....	4,869,380	4,575,429	4,167,025	3,810,653	3,130,558	2,909,245	2,655,115	2,499,422
81 Michigan State University .....	15,360	8,518	7,976i	7,602	7,157	3,881	3,600i	3,399
82 University of Kansas .....	15,332	14,042	12,433	10,865	7,671	6,681	4,523	4,079
83 Loyola U of Chicago .....	14,581	16,844	12,917	4,210	9,091	10,232	8,540	1,586
84 University of Georgia .....	14,517	13,740	15,039	14,660	2,656	2,305	2,683	2,534
85 Rutgers the State U NJ .....	13,123	10,525	8,446	7,708	5,979	4,991	3,998	2,842
86 U of NE Med Ctr Omaha .....	11,872	10,827	9,983	6,058	3,634	3,429	3,835	2,495
87 Eastern Virginia Med Sch .....	11,208	9,302	9,198e	8,688e	7,224	5,663	5,766e	6,326e
88 The Medical Col of PA .....	10,844	11,773	12,494	10,025	6,251	7,869	6,289	4,722
89 Purdue University .....	10,737	8,822	8,115	9,354	7,301	5,784	5,749	5,808
90 George Washington U .....	10,328	11,768	12,318	13,673	6,619	9,183	9,676	11,127
Total, 1st 90 insts. ....	4,997,282	4,691,590	4,275,944	3,903,496	3,194,141	2,969,263	2,709,774	2,544,340
91 St Louis University .....	10,120	10,012	9,424	7,712	8,707	8,320	7,453	5,768
92 U Arkansas Med Sci .....	9,622	9,758	9,405	8,219e	6,706	5,622	4,887	3,354
93 Wright State University .....	9,451	7,364	6,144	5,483	5,652	4,684	4,101	3,492
94 University of Mississippi .....	9,262	8,154	8,102	8,102	3,588	3,809	3,763	4,010
95 Colorado State University .....	8,882	11,062	1,012	759	5,366	8,662	658	355
96 Medical Col of Georgia .....	8,866	8,934	4,701	5,379	1,309	2,155	2,228	2,281
97 U of South Carolina .....	8,764	8,366	9,744	9,934	4,339	3,806	5,152	5,471
98 University of New Mexico .....	8,607	7,685	9,640	7,045	4,563	4,092	4,556	3,567
99 Howard University .....	8,380	7,308	5,092	7,188i	6,827	5,774	2,740	5,537i
100 Creighton University .....	7,713	7,082	7,413e	7,956e	3,179	2,910	2,200e	2,051e
Total, 1st 100 insts. ....	5,086,949	4,777,315	4,346,621	3,971,273	3,244,377	3,019,097	2,747,512	2,580,226
Total, all other sampled insts. ....	198,320	182,264	200,020	183,377	106,760	93,272	101,206	91,236

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-63. Total and federally financed R&D expenditures in psychology at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	349,344	328,114	282,946	252,645	234,186	214,654	186,060	163,608
1 University of Michigan .....	11,952	11,439	6,960	5,388	7,807	7,296	3,391	2,996
2 U WI Madison .....	10,749	10,389	9,469	8,553	8,718	8,510	7,452	6,876
3 MA Institute of Tech .....	8,043	8,018	7,481	7,856	7,313	4,000	6,720	7,231
4 University of Colorado .....	8,006	6,752	5,948	5,178	5,361	4,501	3,999	3,549
5 University of Minnesota .....	7,548	6,341	7,622	6,042	6,037	4,918	4,992	3,962
6 U CA Los Angeles .....	7,435	8,225	7,142	6,681	5,597	5,668	5,199	4,782
7 University of Connecticut .....	7,241	5,754	4,831	3,133	3,038	2,781	2,406	830
8 New York University .....	7,017	3,787	3,458	3,605	6,640	3,217	3,078	3,316
9 Rutgers the State U NJ .....	6,927	7,029	5,894	6,198	3,003	3,017	2,522	2,593
10 U CA Berkeley .....	6,870	7,088	6,548	6,414	4,465	4,029	4,195	3,685
Total, 1st 10 insts. ....	81,788	74,822	65,353	59,048	57,979	47,937	43,954	39,820
11 University of Washington .....	6,778	6,315	5,256	5,097	6,309	5,878	4,543	4,664
12 University of Rochester .....	6,682	5,812	5,062	4,731	3,097	2,979	2,457	2,319
13 Yale University .....	6,298	4,672	3,710	3,181	2,190	1,866	1,705	1,686
14 University of IL Urbana .....	6,088	6,289	5,970	6,169	4,015	3,708	3,557	3,571
15 Pennsylvania State U .....	5,745	6,302	5,768	4,565	2,631	3,463	3,319	2,040
16 Princeton University .....	5,568	5,853	5,238	5,015	3,280	3,237	2,518	2,387
17 Duke University .....	5,202	4,538	2,131	1,558	4,964	4,409	2,074	1,471
18 SUNY Buffalo .....	5,051	4,182	3,681	2,794	1,181	1,327	1,335	912
19 Carnegie Mellon U .....	4,918	4,682	4,232	4,458	3,429	3,325	3,166	3,403
20 Temple University .....	4,906	5,720	2,874	1,242	3,867	3,464	1,749	565
Total, 1st 20 insts. ....	139,024	129,187	109,275	97,858	92,942	81,593	70,377	62,838
21 Indiana University .....	4,704	3,907	3,566	3,089	3,500	2,983	2,605	2,174
22 U of South Florida .....	4,342	3,242	1,783	1,358	1,445	1,255	545	655
23 University of Georgia .....	4,310	4,237	3,526	3,656	1,658	1,502	1,090	1,137
24 Rush University .....	4,142	2,184	2,018	921	1,584	935	836	691
25 SUNY Albany .....	3,765	3,123	2,947	2,797	3,077	2,430	2,128	2,321
26 Michigan State University .....	3,598	3,293	3,081	2,930	1,676	1,996	1,851	1,748
27 Stanford University .....	3,559	3,698	3,599	3,504	3,068	2,633	2,703	2,900
28 U CA San Diego .....	3,545	2,914	2,965	2,617	2,566	2,168	2,163	1,822
29 Arizona State University .....	3,432	2,947	2,556	2,138	2,492	2,056	1,780	1,552
30 SUNY Binghamton .....	3,425	2,715	2,225	2,186	1,675	1,218	766	782
Total, 1st 30 insts. ....	177,846	161,447	137,541	123,054	115,683	100,769	86,844	78,620
31 U of Rhode Island .....	3,404	2,798	2,646	943	3,034	2,371	2,232	806
32 U TX Austin .....	3,364	2,765	2,608	2,259	2,651	2,197	1,987	1,678
33 Cornell University .....	3,321	3,570	3,514	2,909	1,483	1,568	1,558	1,106
34 Harvard University .....	3,251	3,609	2,302	2,064	2,613	2,418	1,652	1,299
35 U CA Santa Barbara .....	3,155	2,861	2,690	2,789	2,479	2,147	1,931	2,075
36 Georgia State University .....	2,969	2,521	2,267	1,626	1,681	805	865	517
37 San Jose State University .....	2,938	2,165	2,594	1,910	2,698	2,150	2,490	1,813
38 Memphis State University .....	2,904	3,153	2,716	3,139	1,216	1,048	665	974
39 San Diego St University .....	2,902	3,208	2,181	1,349	2,086	2,643	2,046	1,087
40 SUNY Stony Brook .....	2,900	2,069	1,793	1,050	2,438	1,752	1,428	849
Total, 1st 40 insts. ....	208,954	190,166	162,852	143,092	138,062	119,868	103,698	90,824
41 University of Houston .....	2,865	2,353	2,167	1,584	2,142	1,720	1,620	907
42 University of Virginia .....	2,823	2,655	2,534	2,406	2,151	2,194	2,207	2,064
43 University of Oklahoma .....	2,803	2,958	2,536	359	833	506	135	104
44 Forest Inst of Prof Psy .....	2,717	--	--	--	0	--	--	--
45 U MA Amherst .....	2,637	2,916	--	--	2,131	2,378	--	--
46 University of Denver .....	2,624	2,925	2,319	1,043	2,329	2,665	2,319	750
47 University of Florida .....	2,564	2,152	1,493	2,114	1,206	928	834	995
48 U of NC Chapel Hill .....	2,441	2,235	1,245	1,013	2,305	1,924	1,134	939
49 U MD College Park .....	2,367	3,494	3,339	4,994	313	1,237	1,125	1,194
50 U of Southern California .....	2,330	10,191	9,776	7,527	2,021	8,252	6,753	5,227
Total, 1st 50 insts. ....	235,125	222,045	188,261	164,132	153,493	141,672	119,825	103,004

See explanatory information and SOURCE at end of table.

**Table B-63. Total and federally financed R&D expenditures in psychology at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 2 of 2

Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
51 Purdue University .....	2,301	1,908	1,394	1,521	1,499	1,363	978	1,183
52 Florida State University .....	2,233	2,151	2,361	3,166	1,244	1,098	1,301	1,449
53 Texas Christian U .....	2,211	2,236	1,731	854	2,202	2,233	1,727	831
54 University of Pittsburgh .....	2,210	2,280	2,236	1,583	2,100	2,092	1,811	1,456
55 Columbia U Main Division .....	2,173	1,938	1,653	1,261	2,173	1,938	1,536	1,149
56 U of Pennsylvania .....	2,161	1,987	1,516	1,546	2,035	1,928	1,467	1,357
57 Colorado State University .....	2,141	2,725	2,476	1,607	1,937	2,513	2,123	1,556
58 University of Arizona .....	2,122	1,978	2,263	626	834	899	1,253	469
59 Brown University .....	2,111	1,518	1,502	1,550	1,430	1,034	1,123	1,301
60 University of New Mexico .....	2,083	1,537	897	552	1,747	1,172	730	418
Total, 1st 60 insts. ....	256,871	242,303	206,290	178,398	170,694	157,942	133,874	114,173
61 University of IL Chicago .....	2,082	1,757	977	275	1,602	1,348	729	163
62 Vanderbilt University .....	2,021	1,844	1,898	1,744	1,643	1,387	1,489	1,433
63 University of Oregon .....	2,007	2,174	2,043	1,552	1,376	1,370	1,380	1,274
64 Oregon Health Sciences U .....	1,882i	1,629i	1,389i	1,350i	1,551i	1,338i	1,153i	1,087i
65 Wayne State University .....	1,872	1,876	1,189	716	1,420	1,341	822	465
66 Northwestern University .....	1,867	1,536	1,191	981	1,538	1,214	916	767
67 University of Kansas .....	1,779	1,437	1,421	1,426	1,048	770	745	764
68 Utah State University .....	1,706	1,763	1,460	497	1,349	1,524	1,154	307
69 VA Polytech Inst & St U .....	1,662	1,463	1,253	1,209	738	884	730	664
70 Kent State University .....	1,526	1,306	932	234	966	1,013	688	170
Total, 1st 70 insts. ....	275,275	259,088	220,043	188,382	183,925	170,131	143,680	121,267
71 U of South Carolina .....	1,518	2,025	1,898	2,261	1,023	1,447	1,252	1,123
72 Georgia Institute of Tech .....	1,492	1,463	1,281	1,696	835	822	735	956
73 Texas A&M University .....	1,407	1,501	756	686	736	625	482	310
74 Brandeis University .....	1,385	1,453	1,345	1,224	1,163	1,167	1,178	1,086
75 University of Utah .....	1,346	1,172	1,035	614	1,020	936	940	488
76 Syracuse University .....	1,330	786	472	486	778	523	366	304
77 Tulane University .....	1,306	712	473	347	212	242	211	129
78 University of Dayton .....	1,304	1,041	885	2,453	1,257	1,010	872	2,446
79 George Washington U .....	1,297	530	202	165	1,148	379	104	141
80 Florida Atlantic U .....	1,231	1,268	1,049	565	1,161	1,229	977	528
Total, 1st 80 insts. ....	288,891	271,039	229,439	198,879	193,258	178,511	150,797	128,778
81 University of Chicago .....	1,192	1,539	1,697	1,008	861	1,005	960	704
82 DePaul University .....	1,166	703	534	612	725	513	425	433
83 U of Missouri Columbia .....	1,128	1,337	1,211	1,449	638	648	754	492
84 Morris Brown College .....	1,127	344i	125	64a	1,127	344i	125	64a
85 Ohio State University .....	1,118	1,004	558	395	610	696	305	135
86 U of Iowa .....	1,066	1,051	1,141	1,009	652	564	707	542
87 CUNY Hunter College .....	1,018	686	903	845	646	504	733	744
88 University of Miami .....	999	1,186	1,102	1,419	857	967	1,029	1,269
89 Virginia Commonwealth U .....	996	550	425	626	560	418	337	489
90 Northeastern University .....	995	904	701	618	949	756	506i	460
Total, 1st 90 insts. ....	299,696	280,343	237,836	206,924	200,883	184,926	156,678	134,110
91 Emory University .....	989	926	720	520	729	649	587	391
92 U of Alabama Birmingham .....	936	887	753	574	708	627	536	378
93 U CA Davis .....	913	677	800	522	827	636	720	434
94 Tufts University .....	906	782	781	854	845	712	723	749
95 Barnard College .....	894	673	400	368	694	587	357	340
96 Gallaudet University .....	853	797i	745i	688i	676	632i	589i	546i
97 U CA Santa Cruz .....	845	657	762	464	622	513	640	401
98 Johns Hopkins U .....	844	1,047	1,243	1,368	783	873	948	1,162
99 CUNY Grad Sch & U Ctr .....	804	590	346	774	258	337	152	319
100 Louisiana State U System .....	800	993	876	795	609	607	594	390
Total, 1st 100 insts. ....	308,480	288,372	245,262	213,851	207,634	191,099	162,524	139,220
Total, all other sampled insts. ....	40,864	39,742	37,684	38,794	26,552	23,555	23,536	24,388

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:**  
e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-64. R&D expenditures in the social sciences  
at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Social sciences total				1993 subfields			
	1993	1992	1991	1990	Eco- nomics	Political science	Soci- ology	Other
Total, all institutions .....	896,139	815,204	750,070	703,109	231,208	152,960	183,562	328,409
1 University of Michigan .....	52,042	44,451	41,259	39,203	15,083	7,429	12,434	17,096
2 Harvard University .....	41,102	43,787	39,711	39,668	12,106	23,768	442	4,786
3 U WI Madison .....	28,580	25,441	22,608	22,661	10,205	1,423	7,434	9,518
4 U MD College Park .....	22,038	14,953	6,549	16,641	9,201	2,005	2,157	8,675
5 U CA Berkeley .....	20,842	19,053	19,894	19,550	159	9,619	5,114	5,950
6 University of Georgia .....	20,782	20,118	19,821	18,538	8,593	1,452	1,480	9,257
7 Ohio State University .....	19,935	16,422	19,640	16,489	5,145	5,886	586	8,318
8 Rutgers the State U NJ .....	18,600	15,609	14,438	13,005	1,169	7,813	4,165	5,453
9 U CA Los Angeles .....	17,739	17,043	16,442	15,530	486	297	771	16,185
10 U of Pennsylvania .....	17,192	17,563	13,484	14,956	5,620	466	2,530	8,576
Total, 1st 10 insts. ....	258,852	234,440	213,846	216,241	67,767	60,158	37,113	93,814
11 U TX Austin .....	15,473	12,890	19,674	15,335	4,161	3,538	4,510	3,264
12 U of NC Chapel Hill .....	14,950	13,924	11,290	10,193	0	0	5,297	9,653
13 Brandeis University .....	13,595	13,173	12,377	11,061	86	161	12,819	529
14 University of IL Urbana .....	12,909	11,241	10,962	10,433	4,151	3,124	144	5,490
15 Texas A&M University .....	12,430	12,224	8,852	9,329	8,004	1,389	2,478	559
16 University of Minnesota .....	12,121	14,000	12,188	11,245	5,753	1,637	2,333	2,398
17 Michigan State University .....	11,771	7,420	6,948	6,622	6,198	1,534	1,631	2,408
18 Iowa St U of Sci & Tech .....	11,636	9,046	8,619	6,289	6,074	344	5,082	136
19 Washington State U .....	11,384	8,892	8,293	8,237	7,250	308	3,220	606
20 Pennsylvania State U .....	10,551	9,934	11,274	8,943	3,518	872	4,544	1,617
Total, 1st 20 insts. ....	385,672	347,184	324,323	313,928	112,962	73,065	79,171	120,474
21 University of Oklahoma .....	10,445	11,593	8,733	4,995	1,235	1,200	241	7,769
22 Cornell University .....	10,425	10,923	11,865	12,049	4,338	74	1,334	4,679
23 Temple University .....	10,373	10,325	9,768	7,688	351	71	9,367	584
24 Duke University .....	10,168	8,192	6,392	7,048	1,541	2,172	3,040	3,415
25 University of Miami .....	9,869	7,933	2,451	1,808	13	0	871	8,985
26 University of Washington .....	9,834	8,115	6,942	4,921	172	2,005	700	6,957
27 George Washington U .....	9,119	7,025	442	402	330	4,809	25	3,955
28 Johns Hopkins U .....	9,050	8,294	10,425	10,767	1,112	46	4,797	3,095
29 Princeton University .....	8,998	9,708	9,562	9,704	1,671	5,390	981	956
30 University of Arizona .....	8,685	8,492	8,271	7,944	4,430	42	2,463	1,750
Total, 1st 30 insts. ....	482,638	437,784	399,174	381,254	128,155	88,874	102,990	162,619
31 University of Connecticut .....	8,549	6,344	4,759	3,254	3,719	259	1,370	3,201
32 MA Institute of Tech .....	8,540	6,467	3,461	4,645	2,540	2,027	0	3,973
33 Arizona State University .....	8,163	7,702	7,489	7,171	1,417	1,396	164	5,186
34 U of Missouri Columbia .....	7,658	6,538	6,481	5,249	4,535	280	2,167	676
35 Georgia Institute of Tech .....	7,632	7,736	8,491	5,246	7,166	134	302	30
36 U of Southern California .....	7,237	5,570	4,599	3,399	220	806	5,211	1,000
37 Purdue University .....	7,002	6,065	5,883	6,607	4,481	82	1,878	561
38 New York University .....	6,936	6,979	5,024	4,532	1,334	4,709	164	729
39 University of Pittsburgh .....	6,836	4,014	3,700	4,246	383	2,781	29	3,643
40 Clemson University .....	6,636	5,575	5,763	4,888	3,408	1,253	186	1,789
Total, 1st 40 insts. ....	557,827	500,774	454,824	430,491	157,358	102,601	114,461	183,407
41 U MA Boston .....	6,459	5,271	--	--	2	1,970	1,439	3,048
42 U CA Santa Barbara .....	6,366	6,121	4,945	4,816	39	100	142	6,085
43 Emory University .....	6,325	4,215	2,749	2,465	8	5,100	685	532
44 Tulane University .....	6,292	7,855	7,527	3,840	190	6	525	5,571
45 U of South Carolina .....	5,942	5,653	5,672	5,343	1,270	793	873	3,006
46 Louisiana State U System .....	5,803	5,515	5,083	4,036	3,002	447	762	1,592
47 University of Delaware .....	5,604	6,699	4,220	2,705	30	0	2,983	2,591
48 Carnegie Mellon U .....	5,531	4,986	4,276	3,412	2,660	1,355	0	1,516
49 Oklahoma State University .....	5,084	6,634	7,968	6,866	3,593	82	198	1,211
50 VA Polytech Inst & St U .....	5,066	3,831	4,956	6,682	1,362	527	88	3,089
Total, 1st 50 insts. ....	616,299	557,554	502,220	470,656	169,514	112,981	122,156	211,648

See explanatory information and SOURCE at end of table.

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**Table B-64. R&D expenditures in the social sciences  
at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 2 of 2

Institution ranking	Social sciences total				1993 subfields			
	1993	1992	1991	1990	Eco- nomics	Political science	Soci- ology	Other
51 Columbia U Main Division .....	4,998	4,989	5,381	5,117	311	506	4,038	143
52 U WI Milwaukee .....	4,973	4,889	3,887	2,472	1,120	302	376	3,175
53 University of New Mexico .....	4,903	7,829	5,443	2,001	260	488	779	3,376
54 U CA Irvine .....	4,821	4,286	3,923	3,666	114	1,486	2,078	1,143
55 Indiana University .....	4,785	4,588	3,955	2,943	1,565	556	697	1,967
56 U of Iowa .....	4,682	3,851	4,139	2,893	320	1,051	1,249	2,062
57 Stanford University .....	4,606	5,195	3,977	2,268	531	70	508	3,497
58 Yale University .....	4,436	3,570	2,903	2,660	1,863	40	14	2,519
59 U of Tennessee System .....	4,277	4,233	4,366	4,658	2,936	742	386	213
60 University of Virginia .....	4,222	4,052	4,850	4,535	245	3,749	96	132
Total, 1st 60 insts. ....	663,002	605,036	545,044	503,869	178,779	121,971	132,377	229,875
61 Colorado State University ....	3,994	3,693	6,388	6,092	8	0	115	3,871
62 The University of Alabama ...	3,866	3,504	2,620	2,762	1,668	267	569	1,362
63 Case Western Reserve U ....	3,858	4,179	2,397	3,188e	782	0	310	2,766
64 University of Colorado .....	3,791	4,948	4,050	4,208	1,547	273	1,305	666
65 SUNY Albany .....	3,743	3,277	3,696	4,211	0	529	1,888	1,326
66 Cleveland State U .....	3,660	4,565	4,310	3,893	12	1	257	3,390
67 University Hawaii Manoa .....	3,612	3,473	3,379	3,157	966	5	289	2,352
68 Mississippi State U .....	3,357	3,414	3,736	3,350	1,917	299	605	536
69 SUNY Buffalo .....	3,333	3,808	4,168	4,421	0	93	469	2,771
70 Northern Illinois U .....	3,313	3,044	3,379	2,769i	0	2,203	703	407
Total, 1st 70 insts. ....	699,529	642,941	583,167	541,920	185,679	125,641	138,887	249,322
71 NC State U Raleigh .....	3,249	3,044	3,422	3,790	2,480	68	701	0
72 Oregon State University .....	3,202	2,868	2,748	2,300	2,280	13	815	94
73 U CA San Diego .....	3,102	2,345	2,168	2,110	560	900	326	1,316
74 Florida State University .....	3,092	4,251	6,537	7,749	282	188	827	1,795
75 Desert Research Institute ....	3,007	2,580	1,977	1,680	0	0	0	3,007
76 University of Florida .....	2,950	3,636	4,507	3,300	1,009	253	271	1,417
77 Vanderbilt University .....	2,900	2,871	3,083	1,561	4	2,833	49	14
78 U CA Santa Cruz .....	2,807	1,908	924	591	217	102	1,262	1,226
79 U Arkansas Fayetteville .....	2,806	2,476	2,569	2,062	62	354	56	2,334
80 Georgetown University .....	2,780	2,414	3,251	3,389	218	291	1,665	606
Total, 1st 80 insts. ....	729,424	671,334	614,353	570,452	192,791	130,643	144,859	261,131
81 U of Rhode Island .....	2,733i	2,389i	2,269	1,553	2,325i	0i	9i	399i
82 University of IL Chicago .....	2,727	3,879	3,496	3,309	106	45	365	2,211
83 Texas Tech University .....	2,674	2,780	3,299	3,999	662	18	1,646	348
84 Wayne State University .....	2,660	2,603	2,042	1,597	114	22	367	2,157
85 University of Chicago .....	2,655	2,911	2,145	4,079	202	654	167	1,632
86 U of New Hampshire .....	2,651	1,848	1,991	1,123	0	24	1,634	993
87 Fort Valley State College ....	2,625	2,711	2,370	0i	1,731e	0	894e	0
88 Illinois State University .....	2,518	1,928	1,564	1,663	0	20	5	2,493
89 U CA Davis .....	2,512	2,353	2,143	1,924	64	1,033	305	1,110
90 Brown University .....	2,459	2,649	635	283	618	230	420	1,191
Total, 1st 90 insts. ....	755,638	697,385	636,307	589,982	198,613	132,689	150,671	273,665
91 Northeast Louisiana U .....	2,438	1,913	618	471	1,979	0	0	459
92 U of Alaska Fairbanks .....	2,435i	3,077	2,397	2,985	164i	0i	1,370i	901i
93 US Naval Postgrad School ...	2,430	2,743	3,490	2,748	426	1,271	434	299
94 West Virginia University .....	2,414	2,202	1,586	1,170	1,645	53	236	480
95 George Mason University ....	2,299	1,300	1,660	2,926	460	1,132	356	351
96 SUNY Stony Brook .....	2,257	2,130	2,308	3,197	701	448	349	759
97 Northern Arizona U .....	2,256	1,128	797	594	75	41	1,196	944
98 Syracuse University .....	2,254	3,800	3,634	3,183	209	312	337	1,396
99 U of Nebraska Lincoln .....	2,244	2,300	2,808	2,774	1,390	273	142	439
100 University of Oregon .....	2,179	1,307	1,282	1,204	121	453	47	1,558
Total, 1st 100 insts. ....	778,844	719,285	656,887	611,234	205,783	136,672	155,138	281,251
Total, all other sampled insts. ....	117,295	95,919	93,183	91,875	25,425	16,288	28,424	47,158

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-65. Federally financed R&D expenditures in the social sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Social sciences total				1993 subfields			
	1993	1992	1991	1990	Eco- nomics	Political science	Soci- ology	Other
Total, all institutions .....	338,031	281,274	252,704	226,307	77,253	44,266	91,092	125,420
1 University of Michigan .....	22,618	15,910	13,963	12,745	10,350	2,925	6,955	2,388
2 U WI Madison .....	15,393	12,410	10,684	10,311	4,634	163	5,400	5,196
3 Ohio State University .....	12,721	9,075	11,382	9,098	3,025	1,781	205	7,710
4 Harvard University .....	11,182	11,130	10,922	12,316	693	8,612	177	1,700
5 U of NC Chapel Hill .....	9,928	8,274	6,406	5,721	0	0	4,450	5,478
6 University of Miami .....	9,597	7,146	2,047	1,394	13	0	704	8,880
7 U MD College Park .....	9,565	5,840	4,030	2,574	4,497	438	790	3,840
8 U of Pennsylvania .....	8,557	7,221	4,324	3,287	1,441	386	1,157	5,573
9 Duke University .....	7,346	4,659	2,883	3,876	736	1,556	2,271	2,783
10 Rutgers the State U NJ .....	7,192	6,446	5,776	4,437	70	1,708	1,950	3,464
Total, 1st 10 insts. ....	114,099	88,111	72,417	65,759	25,459	17,569	24,059	47,012
11 U CA Berkeley .....	5,798	5,385	6,485	6,224	0	1,431	1,936	2,431
12 University of Washington .....	5,641	4,564	3,844	2,919	135	342	342	4,822
13 Michigan State University .....	5,485	3,525	3,270	3,089	2,888	715	760	1,122
14 Iowa St U of Sci & Tech .....	5,302	3,738	2,647	1,792	2,154	13	3,033	102
15 Brandeis University .....	4,991	5,639	5,128	3,870	69	110	4,687	125
16 Johns Hopkins U .....	4,776	4,315	5,409	5,274	315	0	3,731	730
17 Temple University .....	4,612	5,331	4,987	4,597	0	1	4,486	125
18 University of Oklahoma .....	4,483	5,835	4,489	576	149	33	35	4,266
19 Georgia Institute of Tech .....	4,270	4,347	4,876	2,959	4,009	75	169	17
20 U CA Santa Barbara .....	4,145	4,411	3,177	2,895	0	1	83	4,061
Total, 1st 20 insts. ....	163,602	135,201	116,729	99,954	35,178	20,290	43,321	64,813
21 Columbia U Main Division .....	4,076	4,018	3,477	2,534	178	62	3,744	92
22 Pennsylvania State U .....	3,982	3,380	4,194	2,996	1,102	121	2,052	707
23 University of IL Urbana .....	3,938	3,024	2,967	2,615	1,167	499	81	2,191
24 Tulane University .....	3,734	3,653	3,004	1,835	0	4	372	3,358
25 University of Pittsburgh .....	3,734	1,015	1,339	1,264	267	1,730	0	1,737
26 U TX Austin .....	3,501	2,479	3,691	3,269	703	823	1,440	535
27 MA Institute of Tech .....	3,435	1,691	1,285	927	948	993	0	1,494
28 U CA Los Angeles .....	3,433	2,394	2,434	2,605	165	43	230	2,995
29 Washington State U .....	3,427	2,361	2,075	1,942	2,004	0	926	497
30 Carnegie Mellon U .....	3,325	2,678	2,121	1,863	1,718	797	0	810
Total, 1st 30 insts. ....	200,187	161,894	143,316	121,804	43,430	25,362	52,166	79,229
31 U of Southern California .....	3,145	2,389	2,158	1,479	127	12	2,766	240
32 University of Minnesota .....	3,070	3,193	4,204	3,877	986	212	1,842	30
33 George Washington U .....	3,021	2,268	134	81	0	1,959	4	1,058
34 Arizona State University .....	2,822	2,193	1,863	2,076	53	299	1	2,469
35 Desert Research Institute .....	2,814	2,006	1,584	1,265	0	0	0	2,814
36 U CA Irvine .....	2,767	2,305	1,737	1,229	0	944	1,193	630
37 U of South Carolina .....	2,762	1,850	1,735	1,415	844	291	585	1,042
38 SUNY Albany .....	2,623	2,346	2,665	3,075	0	242	1,199	1,182
39 University of Delaware .....	2,573	2,717	1,672	867	0	0	2,482	91
40 University of Arizona .....	2,555	2,118	1,915	1,687	1,361	28	828	338
Total, 1st 40 insts. ....	228,339	185,279	162,983	138,855	46,801	29,349	63,066	89,123
41 Cornell University .....	2,496	2,377	1,902	1,880	1,204	31	360	901
42 US Naval Postgrad School .....	2,398	2,715	3,490	2,748	426	1,239	434	299
43 University of Colorado .....	2,392	3,557	2,638	2,672	1,038	215	941	198
44 Fort Valley State College .....	2,289	2,384	2,047	0	1,510e	0	779e	0
45 U of Missouri Columbia .....	2,176	1,798	1,445	1,402	1,737	0	213	226
46 Texas A&M University .....	2,160	2,142	1,531	1,639	1,050	400	629	81
47 U WI Milwaukee .....	2,133	2,032	1,532	865	71	169	26	1,867
48 Purdue University .....	2,120	1,613	1,419	1,454	1,013	6	1,060	41
49 U of Tennessee System .....	2,062	1,560	1,258	1,491	1,361	365	138	198
50 U of Rhode Island .....	2,051i	1,603i	1,508	1,012	2,051i	0i	0i	0i
Total, 1st 50 insts. ....	250,616	207,060	181,753	154,018	58,262	31,774	67,646	92,934

See explanatory information and SOURCE at end of table.

**Table B-65. Federally financed R&D expenditures in the social sciences at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 2 of 2

Institution ranking	Social sciences total				1993 subfields			
	1993	1992	1991	1990	Eco- nomics	Political science	Soci- ology	Other
51 Clemson University .....	1,968	1,481	1,400	1,419	1,011	372	55	530
52 U of New Hampshire .....	1,944	1,269	1,205	867	0	0	1,183	761
53 Princeton University .....	1,873	1,564	1,063	1,031	340	1,299	170	64
54 VA Polytech Inst & St U .....	1,801	1,316	1,436	2,200	166	25	40	1,570
55 Vanderbilt University .....	1,674	1,888	2,187	1,087	0	1,635	39	0
56 U CA Santa Cruz .....	1,622	1,336	353	131	132	35	1,147	308
57 Northern Illinois U .....	1,485	1,216	1,323	1,161	0	1,060	403	22
58 University of Kentucky .....	1,465	1,239	785	744	426	24	990	25
59 Georgetown University .....	1,444	1,394	2,188	2,372	181	14	1,035	214
60 Florida International U .....	1,441	--	--	--	0	791	132	518
Total, 1st 60 insts. ....	267,333	219,763	193,693	165,030	60,518	37,029	72,840	96,946
61 Northeast Louisiana U .....	1,371	1,800	569	444	1,371	0	0	0
62 University of Georgia .....	1,296	1,368	1,564	1,504	674	28	114	480
63 Indiana University .....	1,274	840	823	997	191	212	266	605
64 Portland State University .....	1,272	1,200	875	950	9	0	17	1,246
65 Emory University .....	1,225	459	449	199	0	1,203	22	0
66 Oregon State University .....	1,215	1,058	855	693	730	0	410	75
67 Northern Arizona U .....	1,211	209	299	93	15	0	1,092	104
68 NC State U Raleigh .....	1,169	1,131	876	833	821	0	348	0
69 Louisiana State U System .....	1,146	624	464	234	211	16	68	851
70 U of Iowa .....	1,130	1,101	1,230	904	220	333	273	304
Total, 1st 70 insts. ....	279,642	229,553	201,697	171,881	64,760	38,821	75,450	100,611
71 George Mason University ....	1,108	331	602	547	0	699	280	129
72 Texas Tech University .....	1,107	1,370	1,272	1,631	24	0	1,063	20
73 University of New Mexico .....	1,075	1,281	961	785	86	108	241	640
74 Brown University .....	1,049	917	425	144	44	12	114	879
75 U CA Davis .....	1,029	583	528	474	10	60	219	740
76 Mississippi State U .....	1,026	1,228	1,077	1,151	560	5	198	263
77 South Carolina State Col .....	1,022	862	544	544	861	0	161	0
78 SUNY Stony Brook .....	998	865	926	1,521	240	227	261	270
79 American University .....	963	1,138	1,390	1,273	0	284	292	387
80 Yale University .....	957	670	770	544	495	0	4	458
Total, 1st 80 insts. ....	289,976	238,798	210,192	180,495	67,080	40,216	78,283	104,397
81 University of Connecticut .....	951	549	216	339	761	37	127	26
82 CUNY Hunter College .....	943	131	199	32	68	0	0	875
83 U CA San Diego .....	935	537	389	469	443	229	116	147
84 Loyola U of Chicago .....	932	251	209	487	0	47	231	654
85 Case Western Reserve U .....	872	828	649	603	33	0	283	556
86 New Mexico State U .....	872	975	448	262	843	12	10	7
87 University of Oregon .....	853	545	546	567	65	218	0	570
88 Fordham University .....	852	954	693	801	0	0	852	0
89 New York University .....	845	999	577	356	262	367	83	133
90 University North Dakota .....	843	383	537	399	0	0	29	814
Total, 1st 90 insts. ....	298,874	244,950	214,655	184,810	69,555	41,126	80,014	108,179
91 California Inst of Tech .....	840	292	300	424	0	0	0	840
92 Stanford University .....	820	1,464	1,394	838	121	1	431	267
93 University of Florida .....	769	925	1,303	663	167	6	90	506
94 U MA Boston .....	765	661	--	--	0	233	0	532
95 University of Houston .....	736	166	629	316	23	210	181	322
96 Gallaudet University .....	726	680	633	587	0	0	725	1
97 University of Rochester .....	698	743	791	424	165	533	0	0
98 University of Denver .....	694	602	50	168	199	0	124	371
99 Syracuse University .....	671	702	739	827	0	34	265	372
100 Oklahoma State University ..	661	790	748	1,035	496	18	13	134
Total, 1st 100 insts. ....	306,254	251,975	221,242	190,092	70,726	42,161	81,843	111,524
Total, all other sampled insts. ....	31,777	29,299	31,462	36,215	6,527	2,105	9,249	13,896

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-66. Current fund expenditures for research equipment at universities and colleges, by science and engineering field and source of funds: fiscal years 1986, 1992, and 1993**

[Dollars in thousands]

Page 1 of 1

Field	Total			Federal			Non-Federal		
	1993	1992	1986	1993	1992	1986	1993	1992	1986
Total .....	1,037,847	1,032,446	782,884	635,091	616,844	501,298	402,756	415,602	281,586
Engineering, total .....	217,375	224,942	145,879	127,720	126,691	85,218	89,655	98,251	60,661
Aeronautical and aeronautical .....	13,274	11,696	7,537	10,795	8,784	5,586	2,479	2,912	1,951
Chemical .....	21,047	19,945	13,979	9,901	10,090	8,225	11,146	9,855	5,754
Civil .....	18,150	15,656	11,690	8,029	7,031	5,939	10,121	8,625	5,751
Electrical .....	55,871	57,147	36,020	36,639	33,915	23,758	19,232	23,232	12,262
Mechanical .....	34,217	31,244	19,012	22,118	18,790	11,719	12,099	12,454	7,293
Metallurgical and materials <sup>1</sup> .....	23,480	28,503	--	11,941	13,880	--	11,539	14,623	--
Other, n.e.c. ....	51,336	60,751	57,641	28,297	34,201	29,991	23,039	26,550	27,650
All sciences, total .....	820,472	807,504	637,005	507,371	490,153	416,080	313,101	317,351	220,925
Physical sciences .....	205,830	198,206	162,888	152,248	151,540	130,487	53,582	46,666	32,401
Astronomy .....	16,674	14,040	5,818	10,915	9,694	4,081	5,759	4,346	1,737
Chemistry .....	74,860	70,205	58,761	52,742	50,610	42,987	22,118	19,595	15,774
Physics .....	85,324	90,782	89,389	63,729	73,054	76,668	21,595	17,728	12,721
Other, n.e.c. ....	28,972	23,179	8,920	24,862	18,182	6,751	4,110	4,997	2,169
Environmental sciences .....	75,624	77,016	51,291	53,414	51,598	34,972	22,210	25,418	16,319
Atmospheric .....	14,194	10,728	10,043	11,075	8,361	8,161	3,119	2,367	1,882
Earth sciences .....	26,684	30,002	17,714	16,323	17,483	9,697	10,361	12,519	8,017
Oceanography .....	23,744	27,560	17,770	18,901	20,910	13,786	4,843	6,650	3,984
Other, n.e.c. ....	11,002	8,726	5,764	7,115	4,844	3,328	3,887	3,882	2,436
Mathematical sciences .....	15,378	10,205	6,827	11,341	6,956	5,193	4,037	3,249	1,634
Computer sciences .....	52,999	45,013	42,590	37,202	29,600	35,132	15,797	15,413	7,458
Life sciences .....	416,690	428,785	330,601	226,291	229,724	188,445	190,399	199,061	142,156
Agricultural sciences .....	52,998	59,065	57,833	19,341	21,558	18,010	33,657	37,507	39,823
Biological sciences .....	170,581	173,756	119,745	104,005	106,045	80,099	66,576	67,711	39,646
Medical sciences .....	175,699	174,591	138,392	95,146	93,392	82,319	80,553	81,199	56,073
Other, n.e.c. ....	17,412	21,373	14,631	7,799	8,729	8,017	9,613	12,644	6,614
Psychology .....	15,417	11,133	8,656	10,555	7,067	5,851	4,862	4,066	2,805
Social sciences .....	19,299	18,043	14,082	7,756	7,777	4,278	11,543	10,266	9,804
Economics .....	4,613	5,084	3,659	1,852	2,477	1,146	2,761	2,607	2,513
Political science .....	3,094	2,660	1,341	990	1,208	350	2,104	1,452	991
Sociology .....	3,695	3,424	2,187	1,932	1,780	920	1,763	1,644	1,267
Other, n.e.c. ....	7,897	6,875	6,895	2,982	2,312	1,862	4,915	4,563	5,033
Other sciences, n.e.c. ....	19,235	19,103	20,070	8,564	5,891	11,722	10,671	13,212	8,348

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-67. Current fund expenditures for research equipment at doctorate-granting institutions, by science and engineering field and source of funds: fiscal years 1986, 1992, and 1993**

[Dollars in thousands]

Page 1 of 1

Field	Total			Federal			Non-Federal		
	1993	1992	1986	1993	1992	1986	1993	1992	1986
Total .....	1,003,939	1,003,368	766,583	614,875	602,215	491,245	389,064	401,153	275,338
Engineering, total .....	211,446	216,692	143,259	124,940	124,836	83,823	86,506	91,856	59,436
Aeronautical and aeronautical .....	13,003	11,365	7,447	10,547	8,533	5,507	2,456	2,832	1,940
Chemical .....	20,930	19,771	13,861	9,831	10,067	8,134	11,099	9,704	5,727
Civil .....	17,184	15,208	11,386	7,452	6,745	5,779	9,732	8,463	5,607
Electrical .....	54,815	55,854	35,480	36,008	33,596	23,464	18,807	22,258	12,016
Mechanical .....	32,792	29,880	18,357	21,361	18,184	11,333	11,431	11,696	7,024
Metallurgical and materials <sup>1</sup> .....	23,376	28,196	--	11,893	13,850	--	11,483	14,346	--
Other, n.e.c. ....	49,346	56,418	56,728	27,848	33,861	29,606	21,498	22,557	27,122
All sciences, total .....	792,493	786,676	623,324	489,935	477,379	407,422	302,558	309,297	215,902
Physical sciences .....	196,004	191,668	158,605	146,236	147,715	127,599	49,768	43,953	31,006
Astronomy .....	16,517	13,963	5,739	10,820	9,634	4,027	5,697	4,329	1,712
Chemistry .....	69,343	66,032	56,379	49,507	48,251	41,372	19,836	17,781	15,007
Physics .....	81,394	88,573	87,975	61,157	71,687	75,601	20,237	16,886	12,374
Other, n.e.c. ....	28,750	23,100	8,512	24,752	18,143	6,599	3,998	4,957	1,913
Environmental sciences .....	72,193	74,756	49,877	51,528	50,529	34,154	20,665	24,227	15,723
Atmospheric .....	13,973	10,627	9,936	10,984	8,335	8,062	2,989	2,292	1,874
Earth sciences .....	25,169	28,696	17,144	15,894	17,058	9,416	9,275	11,638	7,728
Oceanography .....	22,608	27,164	17,417	17,913	20,614	13,620	4,695	6,550	3,797
Other, n.e.c. ....	10,443	8,269	5,380	6,737	4,522	3,056	3,706	3,747	2,324
Mathematical sciences .....	13,953	9,229	6,445	10,487	6,442	4,950	3,466	2,787	1,495
Computer sciences .....	51,653	43,922	41,826	36,493	29,001	34,760	15,160	14,921	7,066
Life sciences .....	408,507	421,093	325,868	221,102	224,406	185,123	187,405	196,687	140,745
Agricultural sciences .....	50,576	55,869	56,414	17,367	18,973	16,823	33,209	36,896	39,591
Biological sciences .....	165,346	169,654	116,860	101,052	103,598	78,315	64,294	66,056	38,545
Medical sciences .....	175,295	174,289	138,051	94,943	93,147	82,032	80,352	81,142	56,019
Other, n.e.c. ....	17,290	21,281	14,543	7,740	8,688	7,953	9,550	12,593	6,590
Psychology .....	14,008	10,325	8,064	9,444	6,473	5,461	4,564	3,852	2,603
Social sciences .....	18,518	17,091	12,935	7,253	7,152	3,885	11,265	9,939	9,050
Economics .....	4,250	4,589	3,399	1,562	2,071	1,058	2,688	2,518	2,341
Political science .....	3,025	2,588	1,183	948	1,173	267	2,077	1,415	916
Sociology .....	3,522	3,216	1,919	1,860	1,642	803	1,662	1,574	1,116
Other, n.e.c. ....	7,721	6,698	6,434	2,883	2,266	1,757	4,838	4,432	4,677
Other sciences, n.e.c. ....	17,657	18,592	19,704	7,392	5,661	11,490	10,265	12,931	8,214

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

KEY: n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-68. Current fund expenditures for research equipment at universities and colleges, by science and engineering field, source of funds, and type of control: fiscal year 1993**

[Dollars in thousands]

Page 1 of 1

Field	Total			Federal			Non-Federal		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
Total .....	1,037,847	682,240	355,607	635,091	375,213	259,878	402,756	307,027	95,729
Engineering, total .....	217,375	144,695	72,680	127,720	73,123	54,597	89,655	71,572	18,083
Aeronautical and aeronautical .....	13,274	8,003	5,271	10,795	6,171	4,624	2,479	1,832	647
Chemical .....	21,047	14,282	6,765	9,901	6,657	3,244	11,146	7,625	3,521
Civil .....	18,150	14,882	3,268	8,029	5,852	2,177	10,121	9,030	1,091
Electrical .....	55,871	33,729	22,142	36,639	18,605	18,034	19,232	15,124	4,108
Mechanical .....	34,217	20,073	14,144	22,118	11,137	10,981	12,099	8,936	3,163
Metallurgical and materials <sup>1</sup> .....	23,480	19,226	4,254	11,941	9,285	2,656	11,539	9,941	1,598
Other, n.e.c. ....	51,336	34,500	16,836	28,297	15,416	12,881	23,039	19,084	3,955
All sciences, total .....	820,472	537,545	282,927	507,371	302,090	205,281	313,101	235,455	77,646
Physical sciences .....	205,830	126,077	79,753	152,248	87,268	64,980	53,582	38,809	14,773
Astronomy .....	16,674	7,836	8,838	10,915	4,087	6,828	5,759	3,749	2,010
Chemistry .....	74,860	47,990	26,870	52,742	32,128	20,614	22,118	15,862	6,256
Physics .....	85,324	50,786	34,538	63,729	34,937	28,792	21,595	15,849	5,746
Other, n.e.c. ....	28,972	19,465	9,507	24,862	16,116	8,746	4,110	3,349	761
Environmental sciences .....	75,624	57,608	18,016	53,414	38,638	14,776	22,210	18,970	3,240
Atmospheric .....	14,194	11,745	2,449	11,075	8,716	2,359	3,119	3,029	90
Earth sciences .....	26,684	18,717	7,967	16,323	10,333	5,990	10,361	8,384	1,977
Oceanography .....	23,744	19,304	4,440	18,901	14,779	4,122	4,843	4,525	318
Other, n.e.c. ....	11,002	7,842	3,160	7,115	4,810	2,305	3,887	3,032	855
Mathematical sciences .....	15,378	9,668	5,710	11,341	6,701	4,640	4,037	2,967	1,070
Computer sciences .....	52,999	23,234	29,765	37,202	13,681	23,521	15,797	9,553	6,244
Life sciences .....	416,690	286,798	129,892	226,291	141,013	85,278	190,399	145,785	44,614
Agricultural sciences .....	52,998	51,319	1,679	19,341	18,637	704	33,657	32,682	975
Biological sciences .....	170,581	113,464	57,117	104,005	62,983	41,022	66,576	50,481	16,095
Medical sciences .....	175,699	109,923	65,776	95,146	55,195	39,951	80,553	54,728	25,825
Other, n.e.c. ....	17,412	12,092	5,320	7,799	4,198	3,601	9,613	7,894	1,719
Psychology .....	15,417	8,064	7,353	10,555	5,022	5,533	4,862	3,042	1,820
Social sciences .....	19,299	14,124	5,175	7,756	5,297	2,459	11,543	8,827	2,716
Economics .....	4,613	3,656	957	1,852	1,449	403	2,761	2,207	554
Political science .....	3,094	1,975	1,119	990	716	274	2,104	1,259	845
Sociology .....	3,695	3,020	675	1,932	1,447	485	1,763	1,573	190
Other, n.e.c. ....	7,897	5,473	2,424	2,982	1,685	1,297	4,915	3,788	1,127
Other sciences, n.e.c. ....	19,235	11,972	7,263	8,564	4,470	4,094	10,671	7,502	3,169

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-69. Total and federally financed current fund expenditures for research equipment at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

Page 1 of 2

Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	1,037,847	1,032,446	1,023,866	1,012,479	635,091	616,844	610,170	606,134
1 U WI Madison .....	26,887	28,145	25,841	29,015	13,884	15,137	13,753	15,693
2 MA Institute of Tech .....	26,629	27,186	23,820	21,498	20,795	20,995	18,079	15,468
3 University of Washington .....	24,144	18,834	22,317	16,651	17,247	14,737	16,540	13,871
4 Johns Hopkins U .....	23,480	19,298	25,567	25,384	21,552	17,488	23,489	23,199
5 Cornell University .....	22,165	20,875	21,912	21,461	14,387	14,276	12,504	13,108
6 University of IL Urbana .....	17,911	21,951	21,437	19,115	10,513	11,207	9,957	10,635
7 Pennsylvania State U .....	17,008	14,742	15,118	13,967	10,595	9,201	11,245	7,411
8 Louisiana State U System .....	16,891	16,678	23,377	18,836	5,691	5,168	13,347	10,539
9 University of Michigan .....	16,602	15,870	16,118	11,881	10,370	9,888	9,446	7,639
10 Stanford University .....	16,317	26,230	21,200	16,496	15,204	24,361	18,764	14,643
Total, 1st 10 insts. ....	208,034	209,809	216,707	194,304	140,238	142,458	147,124	132,206
11 Florida State University .....	15,002	3,097	3,622	5,053	14,139	2,378	1,858	2,658
12 Texas A&M University .....	14,979	25,821	14,046	15,743	6,223	16,279	4,818	6,601
13 California Inst of Tech .....	13,726	12,276	16,242	14,583	12,564	10,939	14,497	13,176
14 University of Arizona .....	12,815	12,841	13,882	15,894	7,495	8,349	7,710	9,438
15 University of Minnesota .....	12,721	12,877	13,470	16,021	7,232	7,825	7,203	8,662
16 U of Southern California .....	12,137	9,878	10,530	9,522	10,633	8,094	9,103	7,795
17 Duke University .....	11,424	9,941	11,203	8,598	7,394	6,295	8,045	5,624
18 University of Georgia .....	11,373	9,637	9,480	9,656	4,238	3,168	3,205	2,699
19 Yale University .....	11,340	13,431	11,063	11,399	7,697	8,033	7,706	8,690
20 University of Rochester .....	11,190	9,899	7,788	10,730	9,256	7,901	5,899	8,914
Total, 1st 20 insts. ....	334,741	329,507	328,033	311,503	227,109	221,719	217,168	206,463
21 Columbia U Main Division .....	10,942	10,788	11,552	11,709	9,322	9,492	9,526	10,044
22 NC State U Raleigh .....	10,827	10,396	12,736	10,588	5,737	5,052	5,516	4,568
23 Georgia Institute of Tech .....	10,768	10,985	11,137	10,100	6,025	6,173	6,397	5,696
24 U of Pennsylvania .....	10,494	10,277	9,289	10,867	7,708	7,447	6,650	7,680
25 Harvard University .....	10,241	11,733	8,834	7,291	7,210	8,203	6,839	5,575
26 Northwestern University .....	10,200	10,904	10,025	8,919	4,798	4,615	3,477	4,114
27 U TX Austin .....	10,087	12,747	11,542	11,001	6,796	7,751	7,248	6,952
28 U of NC Chapel Hill .....	9,944	7,536	8,212	7,192	5,936	4,399	4,227	4,254
29 University of Colorado .....	9,599	8,487	8,311	8,336	6,609	6,715	6,494	6,380
30 U CA San Francisco .....	9,301	8,779	7,661	7,032	5,803	5,145	4,889	4,724
Total, 1st 30 insts. ....	437,144	432,139	427,332	404,538	293,053	286,711	278,431	266,450
31 University of Miami .....	8,986	8,277	9,024	9,738	6,775	6,413	6,720	6,225
32 Indiana University .....	8,658	9,589	5,890	5,789	4,568	5,148	3,572	3,934
33 University of Chicago .....	8,397	9,657	7,485	9,067	7,023	7,372	6,251	7,937
34 U MD College Park .....	8,325	8,175	5,638	9,798	3,870	4,584	4,803	4,255
35 Washington University .....	8,247	9,219	8,262	8,921	5,752	6,552	5,952	6,108
36 Carnegie Mellon U .....	8,167	8,296	7,618	8,358	6,556	5,962	5,006	5,913
37 Purdue University .....	8,051	8,272	7,899	7,690	5,530	5,565	4,516	4,870
38 U CA Los Angeles .....	7,961	6,697	7,433	9,671	4,248	3,489	4,810	5,820
39 Baylor Col of Medicine .....	7,909	8,565	8,765	8,451	3,314	3,822	4,209	3,964
40 U of Tennessee System .....	7,824	5,755	6,638	5,501	2,998	3,026	2,377	2,538
Total, 1st 40 insts. ....	519,669	514,641	501,984	487,522	343,687	338,644	326,647	318,014
41 University of Florida .....	7,605	6,202	6,996	9,622	2,609	1,975	2,795	5,059
42 U of Iowa .....	7,416	7,352	7,840	8,033	3,903	3,877	3,278	3,974
43 University of Utah .....	7,316	10,462	8,044	7,398	5,934	5,632	4,283	3,245
44 U CA San Diego .....	7,166	8,983	12,227	10,989	5,192	6,360	7,864	7,215
45 University of Virginia .....	7,120	6,768	5,093	5,218	5,188	4,681	3,488	3,630
46 Ohio State University .....	7,027	7,339	8,702	6,849	3,520	4,204	3,894	3,020
47 University of Connecticut .....	7,022	4,134	4,947	4,293	1,610	1,462	2,039	1,647
48 U of Nebraska Lincoln .....	6,965	5,528	7,017	5,586	1,395	1,326	1,692	1,209
49 Case Western Reserve U .....	6,783	6,571	5,441	5,005	4,997	4,463	3,989	3,779
50 U CA Berkeley .....	6,718	6,771	5,737	6,562	4,662	4,522	4,285	4,728
Total, 1st 50 insts. ....	590,807	584,751	574,028	557,077	382,697	377,146	364,254	355,520

See explanatory information and SOURCE at end of table.

**Table B-69. Total and federally financed current fund expenditures for research equipment at universities and colleges: fiscal years 1990-93**

[Dollars in thousands]

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Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
51 SUNY Stony Brook .....	6,709	6,495	5,912	7,366	4,227	4,101	4,722	6,335
52 U TX SW Med Ctr Dallas .....	6,431	4,203	6,364	5,772	1,383	1,451	2,335	2,283
53 New Mexico State U .....	6,192	6,700	14,508	8,043	5,714	6,044	13,768	6,170
54 Iowa St U of Sci & Tech .....	6,175	5,971	11,477	6,258	1,870	3,477	7,400	2,737
55 US Naval Postgrad School ..	6,025	4,081	4,614	3,369	6,008	4,026	4,614	3,352
56 U of Alabama Birmingham ...	5,948	4,759	4,322	5,184	4,058	3,049	2,572	3,173
57 Rutgers the State U NJ .....	5,946	5,967	6,337	6,423	2,588	1,840	2,138	1,665
58 Princeton University .....	5,732	6,279	4,792	6,184	3,808	3,869	4,034	4,875
59 Arizona State University .....	5,669	6,365	6,488	7,571	2,179	2,373	1,698	1,920
60 University of Notre Dame .....	5,346	3,462	2,928	2,929	3,748	1,988	1,282	1,593
Total, 1st 60 insts. ....	650,980	639,033	641,770	616,176	418,280	409,364	408,817	389,623
61 Michigan State University ....	5,254	5,763	5,653	5,543	3,711	3,787	2,615	3,967
62 New York University .....	5,254	4,071	3,349	3,726	4,704	3,075	2,533	2,815
63 U CA Davis .....	5,199	5,681	4,936	5,904	2,585	2,665	2,440	3,084
64 University of IL Chicago .....	5,194	5,094	4,851	5,773	1,976	2,449	1,611	3,031
65 U CA Irvine .....	5,099	3,772	4,137	4,116	3,420	2,443	3,151	3,131
66 University of Oklahoma .....	5,077	6,021	4,434	4,150	1,310	1,182	723	1,110
67 U of Missouri Columbia .....	4,951	5,350	5,870	4,489	1,246	1,420	1,552	683
68 University of New Mexico .....	4,897	5,254	3,998	3,126	3,014	2,825	1,728	1,476
69 U TX MD Anderson Cntr Ctr ..	4,875	3,035	3,240	2,828	1,003	737	1,131	777
70 University of Pittsburgh .....	4,869	6,308	5,798	6,309	3,316	4,893	3,964	4,822
Total, 1st 70 insts. ....	701,649	689,382	688,036	662,140	444,565	434,840	430,265	414,519
71 Florida International U .....	4,868	--	--	--	3,724	--	--	--
72 Wayne State University .....	4,694	7,086	4,859	4,828	1,190	1,201	1,102	892
73 University of Houston .....	4,659	5,456	4,083	4,640	2,495	1,786	1,563	2,088
74 West Virginia University .....	4,546	2,866	4,150	5,727	3,995	2,303	2,038	2,555
75 SUNY Buffalo .....	4,530	5,044	4,915	5,081	3,514	3,157	3,078	3,295
76 Rockefeller University .....	4,435	4,401	4,095	3,949	2,040	2,026	1,884	1,817
77 Colorado State University ....	4,375	4,182	5,376	4,967	3,399	2,908	4,466	4,257
78 U MA Amherst .....	4,333	3,582	--	--	2,254	2,298	--	--
79 Oregon State University .....	4,253	6,242	3,769	6,284	2,975	5,515	3,027	5,287
80 KS St U Agri & App Sci .....	4,250	4,694	3,722	3,043	2,087	2,421	1,542	1,146
Total, 1st 80 insts. ....	746,592	732,935	723,005	700,659	472,238	458,455	448,965	435,856
81 Brown University .....	4,240	3,814	3,506	4,883	2,999	2,744	2,271	3,905
82 Vanderbilt University .....	4,209	4,608	4,904	5,017	3,213	3,575	4,229	4,542
83 Emory University .....	4,188	5,024	4,896	5,372	2,359	3,939	3,112	2,805
84 University of Cincinnati .....	4,119	4,305	3,642	4,706	2,200	2,983	1,559	2,713
85 Clemson University .....	4,114	6,396	3,162	4,999	1,857	1,210	751	680
86 U of South Carolina .....	4,011	3,983	6,543	5,563	1,990	1,151	1,236	2,514
87 University of Delaware .....	3,934	2,598	2,633	3,424	1,551	1,244	1,318	1,276
88 Mississippi State U .....	3,899	4,268	2,358	1,818	2,469	2,826	1,435	726
89 U MD Baltimore Prof Sch .....	3,847	4,209	3,956	4,654	1,527	1,331	1,093	1,274
90 Oklahoma State University ..	3,766	3,102	3,897	4,432	1,186	748	1,564	2,262
Total, 1st 90 insts. ....	786,919	775,242	762,502	745,527	493,589	480,206	467,533	458,553
91 Rensselaer Polytech Inst .....	3,719	4,228	4,316	5,728	2,633	2,675	2,266	3,424
92 University of Kentucky .....	3,713	6,494	3,258	2,750	1,818	1,230	1,046	1,283
93 Auburn University .....	3,591	2,945	4,718	4,782	540	519	1,467	1,141
94 Utah State University .....	3,581	3,692	3,882	2,347	1,828	1,363	1,309	725
95 VA Polytech Inst & St U .....	3,534	3,157	4,369	5,624	1,741	1,202	1,888	1,986
96 U of South Florida .....	3,465	4,959	4,239	7,360	886	1,352	1,757	3,735
97 Woods Hole Ocngrphc Inst ..	3,375	3,586	4,160	4,734	3,062	2,886	3,629	4,219
98 U CA Santa Barbara .....	3,371	2,874	3,112	4,314	2,541	2,280	2,039	3,757
99 University of Kansas .....	3,281	3,481	2,916	3,420	1,759	1,763	1,279	1,264
100 Boston University .....	3,205	4,130	3,502	3,593	2,570	3,345	2,806	2,777
Total, 1st 100 insts. ....	821,754	814,788	800,974	790,179	512,967	498,821	487,019	482,864
Total, all other sampled insts. ....	216,093	217,658	222,892	222,300	122,124	118,023	123,151	123,270

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-70. R&D expenditures at university-administered federally funded research and development centers, by character of work: fiscal years 1953-93**

[Dollars in millions]

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Fiscal year	Total	Character of work			
		Basic research		Applied research and development	
		Amount	Percent of total	Amount	Percent of total
1953 .....	121	33	27.3	88	72.7
1954 .....	141	39	27.7	102	72.3
1955 .....	180	49	27.2	131	72.8
1956 .....	194	51	26.3	143	73.7
1957 .....	240	65	27.1	175	72.9
1958 .....	293	78	26.6	215	73.4
1959 .....	338	92	27.2	246	72.8
1960 .....	360	97	26.9	263	73.1
1961 .....	410	115	28.0	295	72.0
1962 .....	470	136	28.9	334	71.1
1963 .....	530	159	30.0	371	70.0
1964 .....	629	191	30.4	438	69.6
1965 .....	629	208	33.1	421	66.9
1966 .....	630	227	36.0	403	64.0
1967 .....	673	250	37.1	423	62.9
1968 .....	719	276	38.4	443	61.6
1969 .....	725	275	37.9	450	62.1
1970 .....	737	269	36.5	468	63.5
1971 .....	716	260	36.3	456	63.7
1972 .....	753	244	32.4	509	67.6
1973 .....	817	296	36.2	521	63.8
1974 .....	865	390	45.1	475	54.9
1975 .....	987	439	44.5	548	55.5
1976 .....	1,147	512	44.6	635	55.4
1977 .....	1,384	600	43.4	784	56.6
1978 <sup>1</sup> .....	1,717	--	--	--	--
1979 .....	1,935	1,022	52.8	913	47.2
1980 .....	2,246	1,132	50.4	1,114	49.6
1981 .....	2,486	1,270	51.1	1,216	48.9
1982 .....	2,479	1,327	53.5	1,152	46.5
1983 .....	2,737	1,484	54.2	1,253	45.8
1984 .....	3,150	1,690	53.7	1,461	46.4
1985 .....	3,523	1,765	50.1	1,758	49.9
1986 .....	3,895	1,876	48.2	2,018	51.8
1987 .....	4,206	2,033	48.3	2,173	51.7
1988 .....	4,531	2,245	49.5	2,285	50.4
1989 .....	4,730	2,352	49.7	2,377	50.3
1990 .....	4,832	2,428	50.2	2,404	49.8
1991 .....	5,079	2,595	51.1	2,484	48.9
1992 .....	5,249	2,844	54.2	2,404	45.8
1993 .....	5,298	2,941	55.5	2,357	44.5

<sup>1</sup> Separate data for basic research and applied research and development were not collected for fiscal year 1978.

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-71. R&D expenditures at university-administered federally funded research and development centers, by science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	5,298,183	5,248,676	5,078,544	4,831,971	4,729,612	4,530,562	4,206,084	3,894,806
Engineering, total .....	1,714,232	1,804,617	1,788,565	1,708,134	1,642,799	1,614,250	1,547,061	1,445,252
Aeronautical and astronautical .....	158,952	162,722	156,265	143,643	145,035	146,894	132,238	126,566
Chemical .....	76,470	78,425	70,277	40,754	40,162	43,964	41,884	40,048
Civil .....	32,590	33,635	16,109	15,083	16,439	17,500	17,568	16,014
Electrical .....	534,275	597,540	638,886	604,894	568,626	555,635	550,430	514,263
Mechanical .....	417,492	468,827	487,644	545,093	628,057	602,857	570,698	540,103
Metallurgical and materials <sup>1</sup> .....	131,835	147,082	137,517	85,650	--	--	--	--
Other, n.e.c. ....	362,618	316,386	281,867	273,017	244,480	247,400	234,243	208,258
All sciences, total .....	3,583,951	3,444,059	3,289,979	3,123,837	3,086,813	2,916,312	2,659,023	2,449,554
Physical sciences .....	2,209,279	2,010,547	1,917,223	1,824,648	1,828,314	1,717,181	1,660,404	1,540,627
Astronomy .....	145,361	138,273	121,353	112,239	112,493	117,658	82,360	79,047
Chemistry .....	281,492	267,973	251,787	261,048	274,359	274,647	261,267	246,911
Physics .....	1,674,572	1,498,458	1,460,765	1,382,608	1,378,015	1,263,616	1,257,808	1,159,738
Other, n.e.c. ....	107,854	105,843	83,318	68,753	63,447	61,260	58,969	54,931
Environmental sciences .....	344,502	352,893	318,874	292,045	298,529	289,352	257,800	232,606
Atmospheric .....	156,327	149,233	125,612	103,239	98,594	91,069	103,504	99,017
Earth sciences .....	62,907	77,051	72,271	64,894	65,212	80,190	76,276	50,361
Oceanography .....	17,185	15,811	14,859	1,664	1,916	1,764	2,032	19,489
Other, n.e.c. ....	108,083	110,798	106,132	122,248	132,807	116,329	75,988	63,739
Mathematical sciences .....	119,938	124,313	132,222	135,374	128,664	126,084	121,793	109,102
Computer sciences .....	649,363	699,551	715,744	685,954	668,092	621,744	472,766	427,297
Life sciences .....	191,261	191,166	145,531	142,394	130,556	123,508	115,416	107,506
Agricultural sciences .....	1,077	1,153	1,041	1,017	1,175	1,397	684	663
Biological sciences .....	136,797	139,047	115,145	112,559	101,287	91,712	87,202	85,195
Medical sciences .....	14,897	16,250	11,355	10,345	10,114	12,996	10,570	8,572
Other, n.e.c. ....	38,490	34,716	17,990	18,473	17,980	17,403	16,960	13,076
Psychology .....	887	945	1,075	1,010	947	973	899	294
Social sciences .....	21,729	21,417	33,935	29,744	23,291	27,868	21,421	19,343
Economics .....	578	613	741	632	491	1,477	2,554	4,043
Political science .....	5,350	5,055	7,610	6,459	3,858	5,843	4,563	4,994
Sociology .....	0	0	0	0	0	0	0	0
Other, n.e.c. ....	15,801	15,749	25,584	22,653	18,942	20,548	14,304	10,306
Other sciences, n.e.c. ....	46,992	43,227	25,375	12,668	8,420	9,602	8,524	12,779

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-72. Federally financed R&D expenditures at university-administered federally funded research and development centers, by science and engineering field: fiscal years 1986-93**

[Dollars in thousands]

Page 1 of 1

Field	1993	1992	1991	1990	1989	1988	1987	1986
Total .....	5,244,317	5,199,391	5,034,126	4,791,517	4,692,202	4,498,909	4,174,718	3,862,913
Engineering, total .....	1,701,814	1,794,533	1,778,735	1,699,499	1,633,585	1,607,422	1,539,481	1,435,137
Aeronautical and astronautical .....	158,832	162,602	156,108	143,495	144,910	146,813	132,169	126,481
Chemical .....	75,541	77,551	69,592	40,218	39,534	43,427	41,378	39,364
Civil .....	32,065	33,120	15,871	14,892	16,238	17,335	17,415	15,815
Electrical .....	531,629	595,600	636,548	602,489	566,345	554,139	548,560	511,852
Mechanical .....	415,151	467,487	486,112	543,687	624,909	600,584	567,922	536,435
Metallurgical and materials <sup>1</sup> .....	130,109	145,561	135,947	84,196	--	--	--	--
Other, n.e.c. ....	358,487	312,612	278,557	270,522	241,649	245,124	232,037	205,190
All sciences, total .....	3,542,503	3,404,858	3,255,391	3,092,018	3,058,617	2,891,487	2,635,237	2,427,776
Physical sciences .....	2,187,412	1,993,023	1,898,561	1,805,714	1,813,116	1,707,217	1,649,404	1,529,586
Astronomy .....	144,302	137,832	120,725	110,708	110,724	115,601	80,418	77,127
Chemistry .....	277,458	265,167	248,897	258,738	271,891	272,970	259,457	244,779
Physics .....	1,663,789	1,489,796	1,449,997	1,370,313	1,368,531	1,258,268	1,251,388	1,153,577
Other, n.e.c. ....	101,863	100,228	78,942	65,955	61,970	60,378	58,141	54,103
Environmental sciences .....	335,223	339,449	314,269	288,489	294,192	286,106	254,889	229,989
Atmospheric .....	149,637	138,362	123,624	101,226	96,625	89,620	102,269	98,069
Earth sciences .....	61,990	76,103	71,294	64,418	64,938	79,720	75,782	49,815
Oceanography .....	17,185	15,811	14,859	1,664	1,916	1,764	2,032	19,489
Other, n.e.c. ....	106,411	109,173	104,492	121,181	130,713	115,002	74,806	62,616
Mathematical sciences .....	118,872	123,471	131,130	134,246	127,724	125,434	121,075	108,196
Computer sciences .....	647,575	698,151	713,894	684,876	667,127	621,172	472,142	426,508
Life sciences .....	185,328	186,711	138,335	136,719	126,607	117,451	111,233	105,540
Agricultural sciences .....	1,077	1,153	1,041	1,017	1,175	1,397	684	663
Biological sciences .....	131,711	135,405	108,423	107,206	97,639	90,372	85,767	83,955
Medical sciences .....	14,619	15,987	11,161	10,304	10,061	8,451	7,973	8,006
Other, n.e.c. ....	37,921	34,166	17,710	18,192	17,732	17,231	16,809	12,916
Psychology .....	887	945	1,075	1,010	947	973	899	294
Social sciences .....	21,404	21,074	33,325	29,231	22,942	27,551	20,890	18,661
Economics .....	578	613	741	632	491	1,441	2,195	3,563
Political science .....	5,264	4,969	7,471	6,346	3,799	5,781	4,523	4,930
Sociology .....	0	0	0	0	0	0	0	0
Other, n.e.c. ....	15,562	15,492	25,113	22,253	18,652	20,329	14,172	10,168
Other sciences, n.e.c. ....	45,802	42,034	24,802	11,733	5,962	5,583	4,705	9,002

<sup>1</sup> Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

**KEY:** n.e.c. = not elsewhere classified

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges



**Table B-73. R&D expenditures at university-administered federally funded research and development centers, by science and engineering field: fiscal year 1993**

[Dollars in thousands]

Page 1 of 1

Institution ranking	Total	Engi- neering	Physical sciences	Environ- mental sciences	Math & computer sciences	Life sciences	Psy- chology	Social sciences	Other sciences
Total, all institutions .....	5,298,183	1,714,232	2,209,279	344,502	769,301	191,261	887	21,729	46,992
1 Jet Propulsion Laboratory .....	1,100,529	433,875	85,968	102,512	478,174	0	0	0	0
2 Los Alamos National Lab .....	1,084,200	404,078	452,225	0	98,434	72,756	0	20,329	36,378
3 Lawrence Livermore Lab .....	998,649	331,882	522,385	21,359	103,569	19,454	0	0	0
4 Argonne Natl Laboratory .....	447,880	207,975	121,528	88,567	7,333	22,477	0	0	0
5 Lincoln Laboratory .....	355,197	247,395	67,416	3,801	36,585	0	0	0	0
6 Brookhaven Natl Lab <sup>1</sup> .....	293,093	65,388	187,081	12,612	1,283	25,240	0	1,268	221
7 Lawrence Berkeley Lab .....	262,679e	11,478e	180,596e	15,056e	3,424e	43,532e	0e	0e	8,593e
8 Fermi Natl Accel Lab <sup>2</sup> .....	200,698	0	200,698	0	0	0	0	0	0
9 Stanford Linear Accel Ctr .....	137,081	0	137,081	0	0	0	0	0	0
10 Plasma Physics Laboratory .....	116,354	0	116,354	0	0	0	0	0	0
Total, 1st 10 insts. ....	4,996,360	1,702,071	2,071,332	243,907	728,802	183,459	0	21,597	45,192
11 Natl Ctr Atmos Res <sup>3</sup> .....	98,627	0	0	98,627	0	0	0	0	0
12 Natl Optical Astro Obs <sup>4</sup> .....	40,135	0	40,135	0	0	0	0	0	0
13 Ames Laboratory .....	37,042	7,811	22,668	0	4,763	0	0	0	1,800
14 Software Engineering Inst .....	35,149	0	0	0	35,149	0	0	0	0
15 Continuous Elec Beam Acr .....	34,924	0	34,337	0	587	0	0	0	0
16 Natl Radio Astron Obs <sup>1</sup> .....	28,412	0	28,412	0	0	0	0	0	0
17 Oak Ridge Associated U <sup>5</sup> .....	11,108	0e	1,975e	312e	0e	7,802e	887e	132e	0e
18 Natl Astron & Ionos Ctr .....	10,990	0	9,334	1,656	0	0	0	0	0
19 Inst for Advanced Tech .....	5,436	4,350	1,086	0	0	0	0	0	0
Total, 1st 19 insts. ....	5,298,183	1,714,232	2,209,279	344,502	769,301	191,261	887	21,729	46,992

<sup>1</sup> Associated Universities, Inc

<sup>2</sup> Universities Research Association

<sup>3</sup> University Corporation for Atmospheric Research

<sup>4</sup> Association of Universities for Research in Astronomy, Inc

<sup>5</sup> Oak Ridge Associated Universities

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:**  
e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

**Table B-74. Total and federally financed R&D expenditures at university-administered federally funded research and development centers: fiscal years 1990-93**

[Dollars in thousands]

Page 1 of 1

Institution ranking	Total				Federally financed			
	1993	1992	1991	1990	1993	1992	1991	1990
Total, all institutions .....	5,298,183	5,248,676	5,078,544	4,831,971	5,244,317	5,199,391	5,034,126	4,791,517
1 Jet Propulsion Laboratory .....	1,100,529	1,136,966	1,105,617	1,065,848	1,100,529	1,136,966	1,105,617	1,065,848
2 Los Alamos National Lab .....	1,084,200	1,011,005	947,550	926,006	1,066,887	993,839	930,101	909,628
3 Lawrence Livermore Lab .....	998,649	1,055,600	1,135,400	1,019,920	995,083	1,054,953	1,133,588	1,016,940
4 Argonne Natl Laboratory .....	447,880	440,648	392,934	347,660	436,933	433,670	384,212	341,757
5 Lincoln Laboratory .....	355,197	364,212	389,453	419,093	355,197	364,212	389,453	419,093
6 Brookhaven Natl Lab <sup>1</sup> .....	293,093	298,112	283,903	263,931	293,093	298,112	283,903	263,931
7 Lawrence Berkeley Lab .....	262,679 <sup>e</sup>	239,405	207,856	196,059	250,177 <sup>e</sup>	227,414	195,865	185,009
8 Fermi Natl Accel Lab <sup>2</sup> .....	200,698	197,653	180,582	184,608	200,698	197,653	180,582	184,608
9 Stanford Linear Accel Ctr .....	137,081	117,715	113,932	115,160	137,081	117,715	113,932	115,160
10 Plasma Physics Laboratory .....	116,354	110,209	90,818	95,267	115,841	110,072	90,597	94,909
Total, 1st 10 insts. ....	4,996,360	4,971,525	4,848,045	4,633,552	4,951,519	4,934,606	4,807,850	4,596,883
11 Natl Ctr Atmos Res <sup>3</sup> .....	98,627	95,510	78,284	66,234	92,040	84,726	76,388	64,296
12 Natl Optical Astro Obs <sup>4</sup> .....	40,135	35,582	27,374	26,035	40,135	35,582	27,374	26,035
13 Ames Laboratory .....	37,042	32,820	26,403	23,275	37,042	32,820	26,403	23,275
14 Software Engineering Inst .....	35,149	32,552	27,139	24,294	35,149	32,552	27,139	24,294
15 Continuous Elec Beam Acr .....	34,924	30,076	28,590	21,352	34,155	29,275	27,464	20,331
16 Natl Radio Astron Obs <sup>1</sup> .....	28,412	26,706	21,872	19,836	27,803	26,706	21,872	19,836
17 Oak Ridge Associated U <sup>5</sup> .....	11,108	11,840	10,430	9,471	11,048	11,194	9,500	8,722
18 Natl Astron & Ionos Ctr .....	10,990	9,332	8,078	7,922	10,843	9,200	7,988	7,845
19 Inst for Advanced Tech .....	5,436	2,733	2,329	--	4,583	2,730	2,148	--
Total, 1st 19 insts. ....	5,298,183	5,248,676	5,078,544	4,831,971	5,244,317	5,199,391	5,034,126	4,791,517

<sup>1</sup> Associated Universities, Inc

<sup>2</sup> Universities Research Association

<sup>3</sup> University Corporation for Atmospheric Research

<sup>4</sup> Association of Universities for Research in Astronomy, Inc

<sup>5</sup> Oak Ridge Associated Universities

**NOTE:** A number of institutions have developed, or are in the process of developing new computer systems and methodologies that enable them to report more accurately the total cost of science and engineering research; therefore, fiscal year 1993 comparisons with data reported in earlier years may be inappropriate.

**KEY:** e = estimated  
i = imputed  
-- = not available

**SOURCE:** National Science Foundation/SRS, Survey of Scientific and Engineering Expenditures at Universities and Colleges

## SECTION C.

# UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS: FY 1993

## DEPARTMENT OF DEFENSE

Institute for Advanced Technology  
(University of Texas)

Lincoln Laboratory  
(Massachusetts Institute of Technology)

Software Engineering Institute  
(Carnegie Mellon University)

Los Alamos Scientific Laboratory  
(University of California)  
Oak Ridge Institute of Nuclear Studies  
(Oak Ridge Associated Universities)  
Plasma Physics Laboratory  
(Princeton University)  
Stanford Linear Accelerator Center  
(Stanford University)

## DEPARTMENT OF ENERGY

Ames Laboratory  
(Iowa State University of Science and Technology)

Argonne National Laboratory  
(University of Chicago and  
Argonne Universities Association)

Brookhaven National Laboratory  
(Associated Universities, Inc.)

Continuous Electron Beam Accelerator Facility  
(Southeastern Universities Research Association)

E.O. Lawrence Berkeley Laboratory  
(University of California)

E.O. Lawrence Livermore Laboratory  
(University of California)

Fermi National Accelerator Laboratory  
(Universities Research Association)

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Jet Propulsion Laboratory  
(California Institute of Technology)

## NATIONAL SCIENCE FOUNDATION

National Astronomy and Ionosphere Center  
(Cornell University)

National Center for Atmospheric Research  
(University Corporation for Atmospheric  
Research)

National Optical Astronomy Observatory  
(Association of Universities for Research in  
Astronomy, Inc.)

National Radio Astronomy Observatory  
(Associated Universities, Inc.)

SECTION D.

SURVEY INSTRUMENTS

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Survey form and crosswalk .....	199



**NATIONAL SCIENCE FOUNDATION**  
ARLINGTON, VA 22230

Dear Colleague:

The National Science Foundation (NSF) requests your participation in its annual Survey of Scientific and Engineering (S&E) Expenditures at Universities and Colleges, Fiscal Year (FY) 1993. This national effort, one of a series on academic science and engineering resources, collects data on current fund expenditures for separately budgeted research and development by S&E field and source of funds, and on current fund expenditures for related research equipment.

These data are solicited under the authority of the National Science Foundation Act of 1950, as amended, and are for statistical use only. Members of Congress, Federal and State governmental planners, and officials in the academic sector use the data to assess the adequacy of the Nation's research base. By contributing timely and accurate information to this survey, you can ensure that your institution is represented in data used by these decisionmakers. You may also find the data useful to your own institution for internal and/or peer analyses.

The survey covers U.S. institutions that grant graduate S&E degrees and/or annually spend at least \$50,000 in support of separately budgeted research and development activities. While participation is voluntary and failure to respond will not have any adverse effect upon your institution, the reliability of the data and therefore the soundness of institutional, State, and national decisions based upon them are in large measure contingent upon receipt of complete and accurate data from all surveyed institutions. *The survey questionnaire is due January 7, 1994.*

This packet contains the following items:

1. Postcard to notify NSF that you have received this package and to request an Automated Survey Questionnaire (ASQ), if one is not enclosed
2. 1993 S&E Expenditures Survey Questionnaire (NSF Form 411), with instructions and NSF/NCES crosswalk
3. "FYT" flyer describing the NSF academic survey system
4. Facsimile showing data reported for your institution on the FY 1990-92 surveys
5. Questions and Answers booklet
6. Envelope for returning the completed survey questionnaire

Please let us know if your package is not complete.

## POSTCARD

Please take a moment to let us know you have received this package by completing and mailing the enclosed postcard, giving the name and telephone number of the person responsible for completing the survey form.

## FY 1993 SURVEY QUESTIONNAIRE (NSF FORM 411) WITH INSTRUCTIONS AND NSF/NCES CROSSWALK

The data items requested on the enclosed FY 1993 questionnaire are identical to those requested for FY 1992. The NSF/NCES Crosswalk shown on the last two pages of the questionnaire links NSF's fields of science and engineering to corresponding codes defined by the Department of Education's National Center for Education Statistics (NCES) in *A Classification of Instructional Programs*. Respondents whose institution's records systems use the NCES classification should find the Crosswalk useful.

To help us monitor survey response burden, we ask you to estimate and report the number of hours you needed to complete the survey.

## AUTOMATED SURVEY QUESTIONNAIRE

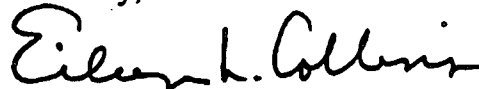
In addition to providing you a more convenient way to report your data, the Automated Survey Questionnaire (ASQ) option allows you to check your responses for both arithmetic and trend errors before returning your report to NSF. To use the automated questionnaire, you will need an IBM PC, or compatible computer system, and DOS 3.0 or a more recent upgrade. *If you have not used ASQ before and would like to receive a copy on diskette, please mark the box on the return postcard and we will send one to you.*

## FOR MORE INFORMATION

If you have questions about the survey or would like information about our publications or data, please call Marge Machen of NSF at (703) 306-1772 or Charles Lyon of Quantum Research Corporation at (301) 657-3070.

Thank you for your efforts in providing timely and meaningful statistics to NSF.

Sincerely,



Eileen L. Collins, Ph.D., Program Director  
Science and Engineering Activities Program  
Division of Science Resources Studies

Enclosures


 NATIONAL SCIENCE FOUNDATION  
 ARLINGTON, VA 22230

 SURVEY OF SCIENTIFIC AND ENGINEERING EXPENDITURES  
 AT UNIVERSITIES AND COLLEGES, FY 1993

Organizations are requested to complete and return this form to:  
**Quantum Research Corporation**  
 7315 Wisconsin Avenue, Suite 631W  
 Bethesda, MD 20814

This form should be returned by January 7, 1994.

Your cooperation in returning the survey questionnaire promptly is very important.

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information you provide will be used for statistical purposes only. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of \$25,342 should be rounded to the nearest thousand dollars and reported as \$25.

Where exact data are not available, estimates are acceptable. Your estimates will be better than ours.

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Data on research centers and facilities administered by your institution should be included. In addition, include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools. Exclude data for federally funded research and development centers (FFRDCs). Data for these facilities are collected separately.

Please correct if name or address has changed

If you have any questions please contact Marge Machen of NSF at (703) 306-1772 or Charles Lyon of QRC at (301) 657-3070.

Financial data are requested for your institution's 1993 fiscal year.

Please circle the month in which your institution's fiscal year begins

1	2	3	4	5	6	7	8	9	10	11	12
JAN											DEC

It is estimated that response to this survey will require 19 hours. If you wish to comment on this burden, please contact Herman Fleming of NSF at (703) 306-1243.

How many person hours were required to complete this form? \_\_\_\_\_

Date submitted \_\_\_\_\_

### Scope:

This survey collects data on expenditures by universities and colleges for separately budgeted research and development (R&D) in science and engineering. Definitions used are compatible with OMB Circular A-21, revised July 23, 1992. Items 1 and 2 ask for *current fund expenditures* by source of funds and by field of science & engineering. Item 3 collects data on that *portion of current fund expenditures* reported in items 1 and 2 that went for the purchase of scientific and engineering research equipment.

### Definitions:

**Research and Development (R&D).** R&D for purposes of this survey is the same as "organized research" as defined in Section B.1.b. of OMB Circular A-21 (revised). It includes all R&D activities of an institution that are *separately budgeted and accounted for*. R&D includes both "sponsored research" activities (sponsored by Federal and non-Federal agencies and organizations) and "university research" (separately budgeted under an internal application of institutional funds).

**Research** is systematic study directed toward fuller knowledge or understanding of the subject studied. Research is classified as either basic or applied, according to the objectives of the investigator.

**Development** is systematic use of the knowledge or understanding gained from research, directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes.

**Current fund expenditures.** These are expenditures of funds available for current operations. Such expenditures include all unrestricted gifts and restricted current funds to the extent that such funds were expended for current operating purposes.

PLEASE TYPE OR PRINT NAME OF PERSON SUBMITTING THIS FORM	TITLE	TELEPHONE NUMBER
		( )
NAME OF PERSON WHO PREPARED THIS SUBMISSION (if different from above)	TITLE	TELEPHONE NUMBER
		( )

### Instructions for Items 1 and 2

Separately budgeted research and development (R&D) includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. *Include* research equipment purchased under research project awards from "current fund" accounts. Also *include* research funds for which an outside organization, academic or other, is a subrecipient. *Exclude* training grants, public service grants, demonstration projects, and departmental research expenditures that are not separately budgeted. Also, *exclude* any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, as well as all other non-science fields. Allocate funding to the original sources whenever possible, as specified below. If this information is unknown, report the proximate funding source.

#### (1) Total

- a. **Federal Government.** Report grants and contracts for R&D (including direct and reimbursed indirect costs) by all agencies of the Federal Government.
- b. **State and local governments.** Include funds for R&D (including direct and reimbursed indirect costs) from State, county, municipal, or other local governments and their agencies. Include here State funds that support R&D at agricultural and other experiment stations.
- c. **Industry.** Include all awards for R&D (including direct and reimbursed indirect costs) from profit-making organizations, whether engaged in production, distribution, research, service, or other activities. Do not include awards from nonprofit foundations financed by industry; these should be reported under *All other sources* (line 1175).
- d. **Institution funds.** Report funds, including indirect costs, that your institution spent for R&D activities from the following sources: (1) general-purpose State or local government appropriations (i.e., unrestricted funds); (2) general-purpose grants from industry, foundations, or other outside sources; (3) tuition and fees; (4) endowment income; and (5) unrestricted gifts. In addition, estimate your institution's contribution to unreimbursed indirect costs incurred in association with R&D projects financed by outside organizations, and mandatory and voluntary cost sharing on Federal and other grants. To estimate unreimbursed indirect costs, use your *actual* (negotiated) university *indirect cost rate* (rather than the proposed rate) multiplied by the base (e.g., direct salaries and wages, etc.) minus actual indirect cost recoveries (i.e., Underrecovery = [(Actual Indirect Cost Rate (including direct and reimbursed indirect costs) x Research Base (salaries, wages, and direct cost items, but *excluding* indirect cost recoveries)] - Indirect Costs Collected)). If your institution now separately budgets what was previously classified as departmental research, include these data in line 1161.
- e. **All other sources.** Include grants for R&D (including direct and reimbursed indirect costs) from nonprofit foundations and voluntary health agencies as well as from all other sources not elsewhere classified. Funds from foundations that are affiliated with, or granted solely to your institution, should be included under line 1160, "Institution funds." Funds for R&D received from a health agency that is a unit of a State or local government should be reported under "State and local governments" (line 1125). Also include gifts from individuals that are restricted by the donor to research.

- (2) **Basic research.** Please provide the percentages of total and Federal expenditures that are basic research (not applied research) as defined in column (2) of Item 1.

### Instructions for Item 3

Please report that *portion* of current fund expenditures reported in items 1 and 2 that went for the purchase of research equipment. This includes all research equipment purchased under sponsored research project awards from current fund accounts.

For column (1) report current fund expenditures for R&D from all sources: Federal Government, State, county, municipal or other governments and their agencies (including State funds supporting R&D at agricultural experiment stations); industry; institution funds; and private foundations and voluntary health agencies, individuals, and associations.

For column (2) include funds from awards for R&D sponsored by agencies of the Federal Government.

### ITEM 1. CURRENT FUND EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT IN THE SCIENCES AND ENGINEERING, BY SOURCE OF FUNDS: FY 1993 (Include indirect costs)

Source of Funds	Line No.	(1) Total (Dollars In Thousands)	(2) Percentages of Total & Federal Funds That Are Basic Research
a. Federal Government	1110	\$	_____ %
b. State and local governments	1125		Basic research is directed toward an increase of knowledge; it is research where the primary aim of the investigator is a fuller knowledge or understanding of the subject under study rather than a specific application thereof.
c. Industry	1150		
d. Institution funds (sum of lines 1161 and 1162)	1160		
(1) Institutionally financed organized research	1161		
(2) Unreimbursed indirect costs and cost sharing	1162		
e. All other sources	1175		
f. TOTAL (sum of a through e)	1100	\$	_____ %

**CONFIDENTIALITY**  
Information received from individual institutions in lines 1161 and 1162, or estimates for basic research expenditures, will NOT be published or released; only aggregate totals will appear in tabulations.

Note: Total R&D expenditures reported in line 1100, column (1) and line 1400, column (1) should be the same.  
Federally financed R&D expenditures reported in line 1110, column (1) and line 1400, column (2) should be the same.

**ITEM 2. CURRENT FUND EXPENDITURES (TOTAL AND FEDERALLY FINANCED)  
FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT,  
BY FIELD OF SCIENCE & ENGINEERING: FY 1993  
(Include indirect costs)**

Field of science & engineering	Line No.	(Dollars in thousands)	
		(1) Total	(2) Federal
a. ENGINEERING (TOTAL)	1410	\$	\$
(1) Aeronautical & astronautical	1411		
(2) Chemical	1412		
(3) Civil	1413		
(4) Electrical	1414		
(5) Mechanical	1415		
(6) Metallurgical & materials	1417		
(7) Other	1416		
b. PHYSICAL SCIENCES (TOTAL)	1420		
(1) Astronomy	1421		
(2) Chemistry	1422		
(3) Physics	1423		
(4) Other	1424		
c. ENVIRONMENTAL SCIENCES (TOTAL)	1430		
(1) Atmospheric	1431		
(2) Earth sciences	1432		
(3) Oceanography	1433		
(4) Other	1434		
d. MATHEMATICAL SCIENCES (TOTAL)	1441		
e. COMPUTER SCIENCES (TOTAL)	1442		
f. LIFE SCIENCES (TOTAL)	1450		
(1) Agricultural	1451		
(2) Biological	1452		
(3) Medical	1453		
(4) Other	1454		
g. PSYCHOLOGY (TOTAL)	1460		
h. SOCIAL SCIENCES (TOTAL)	1470		
(1) Economics	1471		
(2) Political science	1472		
(3) Sociology	1473		
(4) Other	1474		
i. OTHER SCIENCES, not elsewhere classified (TOTAL)	1480		
j. TOTAL (sum of a through i)	1400	\$	\$

Please EXCLUDE from your response any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, and all other non-science and engineering fields.



**ITEM 3. CURRENT FUND EXPENDITURES FOR RESEARCH EQUIPMENT  
(TOTAL AND FEDERALLY FINANCED)  
FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT,  
BY FIELD OF SCIENCE & ENGINEERING: FY 1993**

Field of science & engineering	Line No.	(Dollars in thousands)	
		(1) Total	(2) Federal
<b>a. ENGINEERING (TOTAL)</b>	<b>1810</b>	<b>\$</b>	<b>\$</b>
(1) Aeronautical & astronautical	1811		
(2) Chemical	1812		
(3) Civil	1813		
(4) Electrical	1814		
(5) Mechanical	1815		
(6) Metallurgical & materials	1817		
(7) Other	1816		
<b>b. PHYSICAL SCIENCES (TOTAL)</b>	<b>1820</b>		
(1) Astronomy	1821		
(2) Chemistry	1822		
(3) Physics	1823		
(4) Other	1824		
<b>c. ENVIRONMENTAL SCIENCES (TOTAL)</b>	<b>1830</b>		
(1) Atmospheric	1831		
(2) Earth sciences	1832		
(3) Oceanography	1833		
(4) Other	1834		
<b>d. MATHEMATICAL SCIENCES (TOTAL)</b>	<b>1841</b>		
<b>e. COMPUTER SCIENCES (TOTAL)</b>	<b>1842</b>		
<b>f. LIFE SCIENCES (TOTAL)</b>	<b>1850</b>		
(1) Agricultural	1851		
(2) Biological	1852		
(3) Medical	1853		
(4) Other	1854		
<b>g. PSYCHOLOGY (TOTAL)</b>	<b>1860</b>		
<b>h. SOCIAL SCIENCES (TOTAL)</b>	<b>1870</b>		
(1) Economics	1871		
(2) Political science	1872		
(3) Sociology	1873		
(4) Other	1874		
<b>i. OTHER SCIENCES, not elsewhere classified (TOTAL)</b>	<b>1880</b>		
<b>j. TOTAL (sum of a through i)</b>	<b>1800</b>	<b>\$</b>	<b>\$</b>

Current fund expenditures in each field for scientific research equipment should be a SUBSET of the "Total" and "Federal" columns reported in Item 2.



# CROSSWALK BETWEEN NSF FIELDS OF SCIENCE & ENGINEERING AND THE NATIONAL CENTER FOR EDUCATION STATISTICS (NCES) CLASSIFICATION OF INSTRUCTIONAL PROGRAMS

The left-hand column shows each of the detailed fields as displayed on the questionnaire form. The right-hand column shows the NCES fields that are included within the NSF category as well as some additional illustrative disciplines. These additional disciplines are intended to be guidelines—not sharp definitions—as to what should be reported under a particular field.

Questionnaire Field	NCES Classification and Additional Illustrative Disciplines		
<b>a. ENGINEERING</b>			
(1) Aeronautical and Astronautical	14.02 Aerospace, Aeronautical, and Astronautical Engineering (also aerodynamics, space technology)		
(2) Chemical	03.0509 Wood Science (also petroleum refining process)	14.07 Chemical Engineering 14.32 Polymer/Plastics Engineering	14.25 Petroleum Engineering
(3) Civil	04.02 Architecture 14.14 Environmental/Environmental Health Engineering (also geotechnical, hydraulic, hydrologic, sanitary and environmental, structural, transportation)	14.04 Architectural Engineering	14.08 Civil Engineering
(4) Electrical	14.09 Computer Engineering (also power engineering)	14.10 Electrical, Electronics, and Communications Engineering	
(5) Mechanical	14.11 Engineering Mechanics	14.19 Mechanical Engineering	
(6) Metallurgical & Materials	14.06 Ceramic Sciences and Eng. 14.18 Materials Engineering 14.28 Textile Sciences and Eng. (also welding)	14.15 Geological Engineering 14.20 Metallurgical Engineering 14.31 Materials Science	14.16 Geophysical Engineering 14.21 Mining and Mineral Eng. 40.0701 Metallurgy
(7) Other	14.01 Engineering, General 14.12 Engineering Physics 14.17 Industrial/Manufacturing Eng. 14.24 Ocean Engineering 14.29 Engineering Design 30.06 Systems Science and Theory (also marine and ocean engineering systems)	14.03 Agricultural Engineering 14.13 Engineering Science 14.22 Naval Architecture and Marine Engineering 14.30 Eng./Industrial Management	14.05 Bioengineering and Biomedical Engineering 14.23 Nuclear Engineering 14.27 Systems Engineering 14.99 Engineering, Other
<b>b. PHYSICAL SCIENCES</b>			
(1) Astronomy	40.02 Astronomy (also Gamma-ray, neutrino, optical and radio, X-ray)	40.03 Astrophysics	
(2) Chemistry	40.05 Chemistry (also analytical, inorganic, organic, organo-metallic, pharmaceutical, physical, polymer sciences (except biochemistry))		
(3) Physics	40.08 Physics (also acoustics, atomic/molecular, chemical, condensed matter, elementary particles, nuclear structure, optics, plasma, theoretical/mathematical)		
(4) Other	40.01 Physical Sciences, General	40.0799 Miscellaneous Physical Sciences, Other	40.99 Physical Sciences, Other (used for multidisciplinary projects within physical sciences and for disciplines not requested separately)
<b>c. ENVIRONMENTAL SCIENCES (Earth, Atmospheric, &amp; Ocean)</b>			
(1) Atmospheric	40.04 Atmospheric Sciences and Meteorology (also aeronomy, extraterrestrial atmospheres, solar, weather modification)		
(2) Earth Sciences	15.1102 Surveying 40.0703 Earth & Planetary Sciences (also engineering geophysics, general geology, geodesy and gravity, geomagnetism, hydrology, inorganic, isotopic, lab geophysics, organic geochemistry, paleomagnetism, paleontology, physical geography, seismology)	40.06 Geological and Related Sciences 45.0702 Cartography	
(3) Oceanography Sciences	26.0607 Marine/Aquatic Biology (also biological, chemical, geological, physical)	40.0702 Oceanography	
(4) Other	(used for multidisciplinary projects within Earth, Atmospheric, and Ocean Sciences)		
<b>d. MATHEMATICAL SCIENCES</b>			
	27.01 Mathematics, General 27.05 Mathematical Statistics (also algebra, analysis, foundations and logic, geometry, numerical analysis, topology)	27.03 Applied Mathematics 27.99 Mathematics, Other	27.0302 Operations Research 30.08 Math./Computer Sciences
<b>e. COMPUTER SCIENCES</b>	11 Computer and Information Science, General (also design, development, and application of computer capabilities to data storage and manipulation, information science)		
			52.1201 Management Information Systems

Questionnaire Field		NCES Classification and Additional Illustrative Disciplines (cont.)			
<b>f. LIFE SCIENCES</b>	<b>(1) Agricultural</b>	01.03 Agricultural Production 02.01 Agricultural Sciences 03 Renewable Natural Resources (also agricultural chemistry, agronomy, animal science, conservation, fish and wildlife, forestry, horticulture)	01.0303 Aquaculture 02.04 Plant Sciences 04.06 Landscape Architecture	01.07 International Agriculture 02.05 Soil Science	
	<b>(2) Biological</b>	19.05 Foods and Nutrition Studies 26.0203 Biophysics 26.05 Microbiology/Bacteriology 26.0609 Nutritional Sciences 26.0613 Genetics, Plant and Animal 26.0699 Misc. Bio. Specializations, Other 26.0704 Pathology, Human and Animal 26.0799 Zoology, Other 26.99 Biolog./Life Sciences, Other 51.1307 Medical Immunology 51.1313 Medical Physiology (also allergies and immunology, biogeography, biotechnology, pathology, physical anthropology, virology)	26.01 Biology, General 26.03 Botany 26.0601 Anatomy 26.0610 Parasitology 26.0614 Biometrics 26.0701 Zoology 26.0705 Pharmacology, Human and Animal 51.1301 Medical Anatomy 51.1308 Medical Microbiology 51.1314 Medical Toxicology	26.0202 Biochemistry 26.04 Cell and Molecular Biology 26.0603 Ecology 26.0612 Toxicology 26.0615 Biostatistics 26.0702 Entomology 26.0706 Physiology, Human and Animal 51.1302 Medical Biochemistry 51.1312 Medical Pathology 51.2203 Epidemiology	
<b>(3) Medical</b>		26.0608 Neurosciences 51.1201 Medicine, General 51.17 Optometry 51.20 Pharmacy 51.24 Veterinary Medicine <sup>1</sup> Anesthesiology Dental/Oral Surgery Gastroenterology Hematology Neonatal-Perinatal Medicine Nuclear Medicine Oncology Otorhinolaryngology Physical and Rehabilitative Medicine Psychiatry (exclude all residency programs)	26.0611 Radiation Biology/Radiobiol. 51.1399 Med. Basic Sciences, Other 51.19 Osteopathic Medicine 51.21 Podiatry  Cardiology Dermatology General Surgery Internal Medicine Neurological Surgery Nuclear Radiology Ophthalmology Pediatrics Plastic Surgery Thoracic Surgery	51.04 Dentistry 51.1610 Nursing Psychiatry/ Mental Health 51.22 Public Health  Colon and Rectal Surgery Family Medicine Geriatric Medicine Medical Programs, Other Neurology Obstetrics and Gynecology Orthopedics/Orthopedic Surgery Pharmacology Preventive Medicine Urology	
	<b>(4) Other</b>	30.11 Gerontology 51.10 Health and Medical Laboratory Technologies 51.2308 Physical Therapy (used for multidisciplinary projects within life sciences)	51.02 Communication Disorders Sciences and Services 51.16 Nursing Technologies 51.2399 Rehab./Therapeutic Services	51.07 Health and Medical Administrative Services 51.2306 Occupational Therapy 51.99 Health Professions and Related Services, Other	
<b>g. PSYCHOLOGY</b>		42.01 Psychology, General 51.2301 Art Therapy (also animal behavior, educational, experimental, human development and personality, social)	42.02 Clinical Psychology	42.17 School Psychology	
<b>h. SOCIAL SCIENCES</b>		01.0103 Agricultural Economics (also applied, development, econometrics, industrial, international, labor, public finance and fiscal policy, quantitative, resource)	45.06 Economics	52.06 Business/Managerial Econ.	
<b>(1) Economics</b>					
	<b>(2) Political Science</b>	44.04 Public Administration 44.99 Public Admin. and Services, Other 45.10 Political Science and Government (also comparative government, legal systems, political theory, regional studies)	44.05 Public Policy Analysis 45.09 International Relations and Affairs		
<b>(3) Sociology</b>		45.02 Anthropology (Social and Cultural only) (also comparative and historical, complex organizations, cultural and social structure, group interactions, social problems and welfare theory)	45.05 Demography and Population Studies	45.11 Sociology	
	<b>(4) Other</b>	04.03 City/Urban, Community, and Regional Planning 45.01 Social Sciences, General 45.12 Urban Studies/Affairs (also history of science, socioeconomic geography)	05 Area and Ethnic Studies 43.01 Crim'l. Justice & Corrections 45.03 Archaeology 45.99 Social Sciences, Other	16.0102 Linguistics 44.02 Community Services 45.07 Geography	
<b>i. OTHER SCIENCES, n.e.c.</b>		(used when the multidisciplinary and interdisciplinary aspects make the classification under one primary field impossible)			

<sup>1</sup>Institutions with schools of veterinary medicine should distribute R&D expenditures among the appropriate disciplines (agricultural, biological, and medical) rather than only in medical sciences.

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